

AN EXPLORATORY STUDY OF DIFFERENCES BETWEEN  
A FUNCTIONALLY INFERTILE, AN ORGANICALLY  
INFERTILE AND A FERTILE GROUP OF MARRIED  
COUPLES ON THE DIMENSIONS OF INTERACTIONAL  
FUNCTIONING AND MUTUAL PERCEPTIONS BETWEEN  
PARTNERS

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## ERRORS

p.8., line 20: response = responses

p.39, line 13: Bresnick, 1972 = Bresnick, 1979.

p.48, line 19: Marshall = Marshall

p.51, line 6: roup = group

p.81, line 5: all = cell

p.122, line 18: the hypotheses = the basic hypotheses

p.124, line 1: delete 'for'

p.127, line 19: individual's = individuals'

p.141, line 4: Bresnick, 1972 = Bresnick, 1979.

## ABSTRACT

This study may be divided roughly into two sections: a general outline of the infertility field of study, and an empirical investigation of psychological differences between various infertility subgroups.

In the outline, specific reference has been made to practical and conceptual problems inherent in the diagnosis of infertility, as these have bearing on the type of research that necessitates a division of infertile subjects into subgroups. An attempt has been made to clearly delineate and describe the possible subgroups under the broad categories of organic and functional diagnoses. Theoretical and diagnostic inconsistencies with regard to the latter group have been discussed in some detail, to arrive at an exact definition. In this respect the psychosomatic model of medicine has been introduced as a point of reference. An overview has been presented of the literature which focuses on psychological aspects of infertility. Attitudes towards, and empirical investigations of psychological factors associated with infertility have been critically discussed.

Taking into account some of the biases and errors of previous research, the empirical study was designed to investigate hypothesized psychological differences between respective organically infertile and functionally infertile experimental groups and a fertile control group of married couples. Particular dimensions assessed were interactional family functioning and discrepancies in mutual perceptions between respective

husbands and wives. The McMaster Family Assessment Device and the Semantic Differential technique were used as measures of these respective dimensions, and these were administered to both partners. No significant differences were found between any of the groups investigated. On the basis of the findings of the present study and much of the previous research in the field, the basic assumptions that psychopathological factors may be associated with infertility, especially in the case of a functional diagnosis, have been questioned. The counselling and crisis intervention models were proposed as a more appropriate way in which to understand the emotional problems of infertile couples.

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1.

## CHAPTER ONE

### BACKGROUND AND INTRODUCTION TO THE FIELD OF INFERTILITY

In both clinical practice and professional publications, the term 'infertility' has almost exclusively replaced 'sterility'. The latter had developed connotations of permanence and irreversibility, an inaccurate reflection in the context of advances in understanding and methods of intervention which now fail in a relatively small percentage of cases. Paradoxically, the increased interest and progress in the field of infertility diagnosis and management during the past two decades have resulted from Western medicine's preoccupation with the search for means to control reproduction. A better understanding of the mechanisms involved in reproduction allows better control for those wishing to postpone or prevent conception, as well as for those wishing to improve their reproductive capacity (Taymor, 1978).

In a review of general trends in the literature on infertility, Kraft (1980) divided the content into three categories - studies on the incidence of infertility; studies on the medical issues and procedures; and studies on the psychological impact of infertility. To this may be added a fourth category, the impact of psychological factors on infertility. The role of psychological factors in both the genesis of infertility and in the exacerbation of existing infertility problems has in fact been the focus of a great deal of attention in the literature. This has resulted in a range of promising but often conflicting and contradictory opinions and findings (Barglow & Peterson, 1980; Christie, 1978; Mai, 1969; Mozley, 1976;

Noyes and Chapnick, 1964). An aspect of the present study has been an attempt to contribute to the understanding of this fourth category.

### Infertility defined

The widely accepted definition of infertility (for married couples) proposed by the American Fertility Society states that "a marriage is to be considered as infertile when pregnancy has not occurred after a year of coitus without contraception" (Taymor, 1978, p.10). Such definitions are derived from studies of fertility which have found, for example, that pregnancy can be achieved within 12 months by 75% of (married) couples (Southam, 1960). Cooke et al (1981), extrapolating from the figures of Cramer et al (1979) for the U.S.A., agreed that one year's failure to conceive could realistically be taken as evidence of infertility. Figures reported for the U.K. suggest that 95% of the population should have achieved pregnancy after 2 years of adequate exposure, and that it is likely that even after 12 months a reasonable suspicion of infertility may be entertained (Vessey et al 1978).

An obvious problem inherent in the type of definition given above is the basis on which 'adequate exposure' is determined. To some extent practitioners have relied on patients for verbal reports which have been accepted in good faith. The unreliable nature of such information is evident in the accounts



of patients who admit to fabricating frequency reports to satisfy their doctors or to protect their own egos (Menning, 1977). A more thorough approach is to make a decision based on a postcoital (Hühner or "PK") test during the fertile phase of the female partner's cycle. A diagnosis of infertility is not made in cases of voluntarily non-consummated marriages or of ignorance with regard to sexual anatomy and technique necessary for conception to occur (Karabasanoglu et al, 1972).

A broader definition of infertility, but not commonly used, includes those who conceive but are unable to carry a pregnancy through to a live birth (Menning, 1977). This group of 'spontaneous' or 'habitual aborters' receives specialist attention in the literature as a separate syndrome (Grimm, 1962; Wall, 1969), and there is a tendency to exclude such cases, then referred to as relative infertility, from studies of infertility. An attempt has been made to exclude patients representing this group from the present study.

Various subgroups are found within the infertile population, and these are defined mainly in terms of established or suspected etiological factors. A broad distinction is made between cases in which identified organic pathology is sufficient to account for the infertility, and cases in which infertility occurs either in the absence of identifiable organicity or with organic pathology which alone appears to be insufficient to account for the infertility (Karabasanoglu et al, 1972; Mai et al, 1972; Mai, 1978; Moghissi & Wallach, 1983;

Templeton & Penney, 1982). Different labels applied to the latter cases in the literature are 'unexplained', 'idiopathic', 'normal', 'functional', 'psychogenic' and 'psychosomatic' infertility. At times these are interchangeable, but their differences are to be discussed in more detail in the section on the respective subgroups. Infertility with or without an organic basis may be attributed to either the male or the female partner, or to a combination of both partners.

There is a natural decrease in fertility with age, and the prognosis for infertility is dramatically reduced for women over 35 years of age. In such cases, the inability to conceive is given serious attention on clinical presentation after only a 6-month period or less of adequate sexual exposure, and a thorough infertility investigation of both partners is usually recommended immediately. In contrast, before labels such as 'unexplained' are confidently applied, it is usual to extend the definition to 2 years of adequate exposure without conception occurring. This allows for a thorough medical investigation to rule out possible organic factors for both partners which may account for the infertility. The extended period further allows for conception to occur in cases which may represent the small percentage of fertile couples who conceive in a time span beyond the first year (Pepperell et al, 1980). In a study reported by Guttmacher (1952), only 10% of all those who failed to achieve pregnancy in the first year, conceived without intervention by the end of a two year period.

A further important distinction is made between primary infertility

(cases in which there is no history of conception) and secondary infertility (cases in which one or more children have been born prior to the onset of infertility).

#### Incidence of infertility

It is difficult to arrive at exact statistics for incidence of infertility. Figures are subject to the influence of numerous factors, which may account for inconsistencies found in the literature. Examples of such influencing factors are: adequacy of evaluation which varies considerably among different centres, and depends on the competence of the physician, the availability of clinical and laboratory facilities, and the perseverance of the individual patients (Moghissi & Wallach, 1983); intrinsic population differences; definitions of normality; referral patterns (practices known to specialize in infertility are likely to have a much higher referral rate on the one hand, and on the other not all cases of infertility present for medical attention) (Templeton & Penney, 1982); socio-cultural norms and customs, such as typical marrying age or contraceptive practices, may influence incidence figures across communities, or for a particular community at different points in time (Mazor, 1979; Taymor, 1978).

The above factors may influence figures given for the total infertility population, as well as the breakdown figures to be included in the later sections on the respective subgroups.

Given these difficulties, Mazor (1979) estimated that 1 out of 6 American couples have difficulty conceiving or carrying a

pregnancy to term. Straker (1963) reported that 12% of the population of the U.S.A. experience infertility, a figure consistent with those reported by Wall (1969) of 10-15% who experience infertility problems, and a further 10% who abort repeatedly.

According to a local specialist in the field, there are no figures available for the South African population.

### Infertility subgroups

The division into two broad categories, organic infertility and functional and psychogenic infertility, has been decided on the basis of presence or absence respectively of known organic pathology which would sufficiently account for the etiology of the infertility. Presentation of both the male and female partner will be discussed within the subgroups.

### Organic infertility

As a result of improved medical procedures and techniques, the percentage of infertility cases attributed to primary organic etiology has risen over the past two decades from approximately 50% to figures varying approximately between 80-90% (Eisner, 1963; Menning, 1977; Moghissi & Wallach, 1983). Menning (1977) reports that 40% of these cases are attributed to female organicity, 40% to male organicity and 20% to a combination of male and female factors. She gives a positive prognosis figure of over 50% for members of this group who undergo adequate medical treatment. It is argued by some that with further development of sophisticated techniques, organic pathology will be

demonstrated in 100% of infertility cases (Mozley, 1976), but the interpretation of such a possibility is controversial (Menning, 1977; Mozley, 1976). This controversy will be highlighted in the following section.

As a basis for understanding the organic causes of infertility, it is useful to summarize the prerequisites of normal fertility. A diagrammatic representation found in Figure 1 has been taken from Taymor (1978), who offers the following brief explanatory description:

Production of an adequate number of adequately motile and normal spermatozoa by the male partner; transport of these spermatazoa and deposition of an adequate number in the portico of the cervix; sperm survival and transport in the cervix and uterine fluid; transport of the sperm to the distal portion of the Fallopian tubes, growth and development of a normal follicle, ovulation of a normal ovum, transport of the ovulated ovum to the distal portion of the Fallopian tube; fertilization (indicating that coitus occurred during a required time interval); transport of the fertilized gamete down the Fallopian tube to the uterine cavity; and finally, adequate hormone production by the ovary to insure nidation and further development of the embryo (p.15).

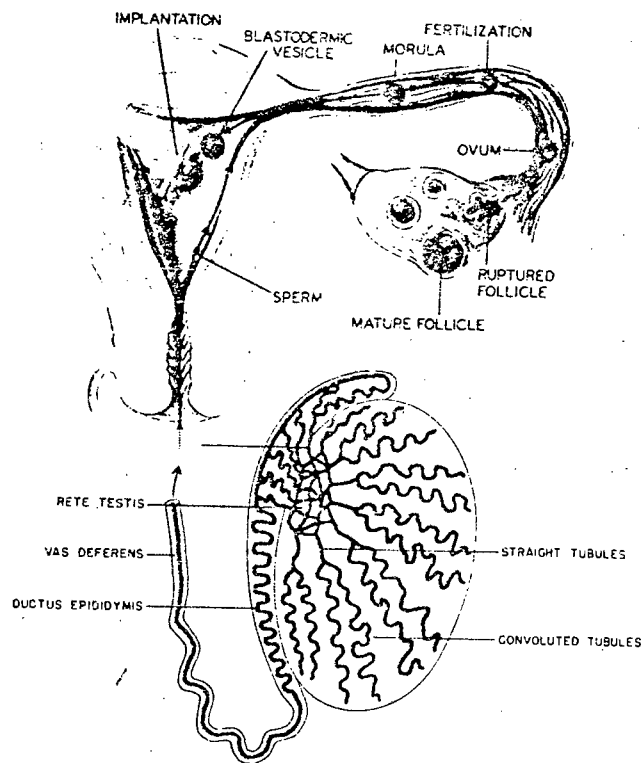


Figure 1  
Pathways to conception

Figure 2, also taken from Taymor (1978, p.16), outlines the areas where fertility can be blocked or diminished.

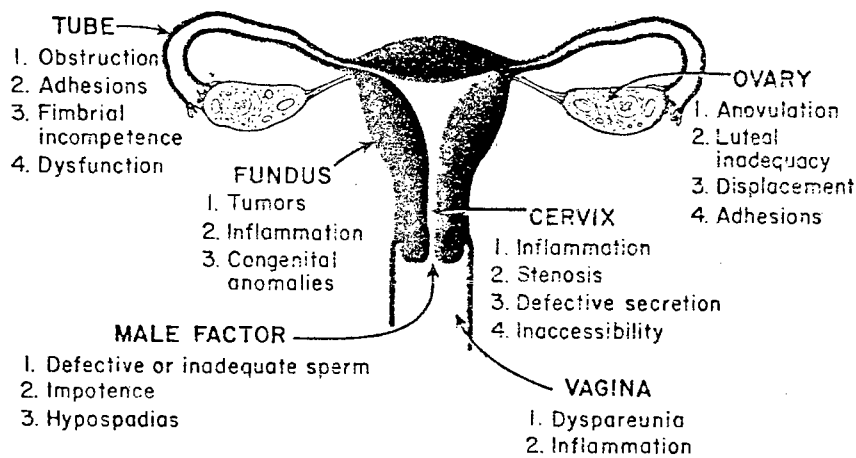


Figure 2  
Causes of infertility

The following brief outlines of respective male and female organic impairment and possible etiologic factors have been adapted from Menning (1977) and Taymor (1978). A more sophisticated and technical account may be found in Danforth (1977, chapter 42).

Male infertility may arise in any of four ways:

1. problem with sperm production (spermatogenesis) or maturation of sperm;
2. problem with the ability of sperm to swim (motility);
3. blockage in the reproduction tract between where sperm are produced and where they are ejaculated;
4. problem in depositing the seminal fluid normally within the vagina.

Possible causes of the above:

Varicocele (varicose vein usually occurring next to left testicle);

Hydrocele (small bag of fluid within the scrotum);

Mumps after puberty;

Infection (V.D.; T-mycoplasma; tuberculosis);

Acute febrile diseases (infertility temporary, usually clearing within 3 months after illness);

Undescended testicles (Cryptorchidism);

Heat exposure (temporary arrest of sperm maturation);

Radiation (usually temporary);

Diet (vitamin A, B complex or C deficiencies);

Diabetes; prostatitis; severe systemic disease;

chronic illness; alcohol or drug ingestion (all may lead to temporary impotence);

Congenital factors (Klinefelters Syndrome; aplasia of the testicles; absence of vasa deferentia);

Injury or trauma directly to reproductive organs or to other related parts of the body, such as spinal cord or brain, for example :

Ageing (gradual decline after 40)

Autoimmune factors

Retrograde ejaculation

Endocrine deficiencies (very rare)

Female infertility may present with any of the following:

1. mechanical barrier at some level (cervical, uterine or tubal) which prevents union of ovum and sperm;
2. endocrine disorder of any of the glands that influence the menstrual cycle (viz. hypothalamus, pituitary, thyroid, adrenals or ovaries);
3. structural defects in the organs of reproduction (most commonly the uterus or cervix).

Possible causes of the above:

Infection (V.D.; pelvic inflammatory disease (PID);

T-mycoplasma; tuberculosis );

Endometriosis;

Cervical factors (cervicitis; impassable cervical mucous; cervical stenosis or polyps; hostile secretions);

"Post-pill Syndrome" (poor quality ovulation or amenorrhoea);

Stein-Leventhal Syndrome (follicular cysts or polycystic ovaries leading to absent or irregular ovulation);



Hormonal problems (such as pituitary failure as result of tumour or hemorrhage that destroys tissue);  
 Removal or congenital absence of ovaries (Turner's Syndrome);  
 Fibroid tumours, congenital malformation or malposition of uterus;  
 Hysterectomy;  
 Diet (insufficient protein, vitamins or trace minerals);  
 Radiation (more likely to produce malformed child);  
 Vaginismus (due to presence of lesions, adhesions or infection);  
 Alcohol; drugs (in excess may reduce desire);  
 Immunologic reaction to sperm.

A point previously stated was that diagnosis depends on factors such as the clinical skills of individual practitioners, available facilities and resources, and the cooperation of the patients themselves. Further difficulty in diagnosis and management of infertile couples has related to the separation of male and female partners who may be investigated by a urologist and a gynaecologist respectively, frequently with poor communication or combined effort between the two specialists (Bacher, 1980)<sup>1</sup>. A recent development has been the creation of a separate speciality, Andrology, which focuses on the study of the endocrinology of male reproduction and infertility. The importance of handling infertile couples as a unit has gained increased recognition internationally, and as a result infertility clinics have been established which combine the sub-departments of Gynaecology, Urology and Andrology. Local

examples of this approach are found at Groote Schuur and Tygerberg Hospitals (Van Zyl, 1980).

On the basis of the diagnosis, which should involve a thorough investigation of both partners, a decision has to be taken whether the condition is treatable or not, and if it is, whether to treat the male or female partner, or both. A successful outcome may take many years to be achieved, and the original condition may be exacerbated by the stress induced by the medical intervention itself, referred to as the iatrogenic factor. An outline, as enunciated by the American Fertility Society, of the very basic investigation for organic factors is as follows:

1. history and examination of the female partner;
2. evaluation of the insemination factor (post-coital test);
3. evaluation of tubal potency (tubal insufflation or hysterosalpingogram);
4. evaluation of the hormonal factor (ovulation);
5. history and examination of the male partner; and
6. semen analysis (Taymor, 1978, p.12).

A more recent trend, reflected in the attitude of local practitioners, seems to be that tubal patency cannot be confidently ruled out as a possible factor contributing to infertility until a laparoscopy has been performed. This is a surgical procedure which allows direct visualization of the ovaries and the exterior of the tubes and uterus by means of an instrument introduced through a small incision below the navel (McBain & Pepperell, 1980; Taymor, 1978).

### Functional and psychogenic infertility

Difficulty in establishing the exact relationship between the terms 'unexplained', 'idiopathic', 'normal', 'functional', 'psychogenic', 'psychophysiologic', and 'psychosomatic' infertility arises from inconsistencies in descriptions and disagreements in explanations for these offered by different practitioners and authors in the field.

McBain and Pepperell (1980) offer a relatively precise description of unexplained infertility as being diagnosed only when no major or minor abnormality in either partner has been detected to the extent that:

... the woman has been shown to be ovulating regularly, to have patent Fallopian tubes, to be free of peritubal adhesions, fibroids and endometriosis and to have a sexual partner with normal sperm production. intercourse must have been performed frequently, especially at about the time of ovulation, and the couple must have been attempting to conceive for at least two years (p.165).

An added dimension is found in a similar but less detailed description of unexplained infertility given by Moghissi and Wallach (1983) as applying

... to that couple who has failed to establish a pregnancy despite an evaluation that uncovers no obvious reason for infertility or after correction of the factor(s) identified as responsible for infertility (p.5)

According to Wall (1969), "idiopathic infertility is a term reserved for those couples in which no cause can be found, in spite of a dependable, complete infertility survey" (p.907). This application appears to be synonymous with

'unexplained' as used above, and with 'normal' when it appears in any text, such as Kleegman and Kaufman (1966), Noyes and Chapnick (1964) and Southam (1960). The latter term has fallen into disuse, mainly as it is a confusing misnomer to label as 'normal' an obviously problematic condition (Moghissi & Wallach, 1983). Thus far, the emphasis has been on an absence of any organic sign or symptom accompanying the infertility.

Confusion and disagreement enters when the term 'functional infertility' is introduced, and when etiological explanations for these and the above conditions are attempted. The term 'functional' has been applied synonymously by some to the above conditions outlined in the previous paragraph (Deutsch, 1945; Ford et al, 1953; Mai et al, 1972), and by others to include those disturbances not traceable to definite disease processes of organic structures, such as in certain cases presenting with minor endocrine disorders and menstrual irregularities, including anovulation or amenorrhoea (Brand et al, 1982; Karabasanoglu et al, 1972). As a result of this broader definition of functional infertility, there is an almost aggressive insistence on the part of certain (local) practitioners to define specifically what is meant by functional, idiopathic or unexplained infertility respectively, especially when these categories are applied in the selection of subjects for research purposes. In the case of idiopathic and unexplained infertility, in particular, most practitioners are likely to demand that certain obscure or recently recommended

assessments be performed to ensure the absence of any sign likely to exclude application of these labels, for each patient. This response is not met to the same extent when using the term 'functional', provided that the broader definition is stipulated, as this broader definition appears to have been generally accepted.

Up to this stage, terms defined have been those used to describe certain conditions, without etiological implications. The issues become far more complex and controversial at the level of attempted etiological explanations, where terms such as 'psychogenic', 'psychophysiologic', and 'psychosomatic' may appear.

Although there seems to be no disagreement that infertility may have a psychological impact on any infertile couple, there is less consensus on the issue of the potential role of psychological factors in the etiology of infertility. In the past, the concept of psychologically caused infertility has at times been equated with only those cases in which no organic pathology is identified i.e. unexplained or idiopathic cases (Banks et al, 1963; Deutsch, 1945; Eisner, 1963; Ford et al, 1953; Kroger & Freed, 1950; Macleod, 1964; Rutherford, 1965). With technological advances and increased sophistication of diagnostic assessment procedures, the incidence figures for idiopathic or unexplained infertility have significantly decreased.

The estimated average figure is given as 10-15% of all infertile couples (McBain and Pepperell, 1980; Moghissi and Wallach, 1983), although figures in some recent reports vary as much as from

3,5% (Drake et al, 1977) to 24% (Templeton and Penney, 1982).

On the basis of this decline in the diagnosis of unexplained or idiopathic infertility, Menning (1977) raises the possibility that in time organic causes will be found in all cases of infertility, and argues for the abandonment of a concept of psychologically-caused infertility. Perhaps Menning's overstated rejection of the concept is more aptly directed at the damaging psychological stereotypes which have resulted from speculation based on unscientific or isolated case studies of women diagnosed as psychogenically infertile. At the opposite extreme, it has been suggested that even cases with gross organic pathology may be attributed etiologically to psychological factors, and that the organic and functional or psychogenic dichotomy is thus unnecessary with regard to etiological explanation (Seward et al, 1965). Mozley (1976) presents the more balanced view that although it is likely that evidence of structural, physiological or chemical pathology will eventually be found in all cases of infertility, the underlying cause in certain cases may be of a psychological nature. The latter cases referred to are those in which the limbic system is implicated, and seem to correspond to those included under the broader definitions of functional infertility. On isolated occasions, 'functional' has been used as an explanatory term synonymous to 'psychogenic' (Benedek et al, 1963), but the more correct use of the former seems to be descriptively. Because of the absence of known etiology, functional cases are prone to a psychogenic understanding and

are thus associated with greater psychopathology than are those couples confronted with the emotional adjustment to an organic condition with known etiology.

In summary, all cases referred to as idiopathic or unexplained infertility in the literature and in clinical practice fall under the definition of functional infertility, which in its broader sense includes in addition those cases in which there may be organic pathology for which there is no known explanation based on the conventional medical disease model. There are some who argue that in time both organic pathology and organic disease model explanations will be found in every instance of infertility. A range of hypotheses for these as yet unidentified factors may be found in most medical texts examining unexplained or functional infertility, Pepperell et al (1980, Chapter 8), for example. However, it seems more likely that certain cases will remain fully understood only in terms of the potential role of psychological factors in their genesis, and it is this view that has informed the present study. The controversial view that even the most gross forms of organic pathology may result from psychological factors has been rejected although it is acknowledged that psychological factors may exacerbate such conditions which may thus involve a psychogenic component.

On the basis of this discussion, it is understandable that to some extent incidence figures coincide for what is referred to as psychogenic, functional, unexplained and idiopathic infertility. Differences in reported figures for these groups may

relate to problems outlined in establishing general infertility figures, to differences in their given definitions, and to the fact that 'functional', 'unexplained' and 'idiopathic' are essentially descriptive, whereas 'psychogenic' involves a level of explanation. Eisner (1963) suggested that possibly more than 50% of infertility cases were psychogenic, basing the concept on an absence of proven organic causes. In a review of the more recent literature, Mai (1978) reports figures varying between 4-16% for psychogenic infertility. No reliable prognostic figures for any of these types could be found in the literature. Those found, vary as much as from 3% (Templeton & Penney, 1982) to 60% (Pepperell et al, 1980). Figures for unexplained or idiopathic infertility, which tend to coincide with functional infertility, have been previously referred to.

In the light of difficulties outlined in this section, a comprehensive listing of symptoms and underlying causes similar to that presented for organic infertility, will not be attempted for functional infertility. However, certain conditions commonly recognized as functional (provided of course, that there is no apparent disease model explanation for the particular presentation) will be listed, but without attempting any related causal explanations for these. The complexity of the latter task will become even more apparent in the following two chapters. In addition to these conditions listed below, are those cases where conception fails to occur in the absence of any apparent sign or symptom on full physical investigation of both partners.



Typical functional conditions proposed for the male are certain cases of:

- Impotence i.e. impaired erection which may inhibit or prevent ejaculation;
- Azoospermia or spermatogenesis impairment;
- Ejaculatory disturbances, including premature, delayed sham and retrograde ejaculation (Abse, 1966; Berger, 1980; Carenza & Agostini, 1975; Dubin & Amelar, 1972; Palti, 1969; Sandler, 1968; Walker, 1978).

Typical functional conditions proposed for the female are certain cases of:

- Ovulatory disturbances, including anovulation;
- Irregularities of the menstrual cycle, including amenorrhoea;
- Spasm of the Fallopian tubes, with inhibition of fertilization or implantation;
- "Hostile" cervical excretions (detrimental to survival or motility of sperm);
- Vaginismus (Berger, 1980; Foldes, 1975; Karp, 1972; Kroger & Freed, 1950; Sandler, 1968).

CHAPTER TWO

THE CONCEPT OF PSYCHOGENIC INFERTILITY AND ITS RELATION  
TO GENERAL PSYCHOSOMATIC MEDICINE

With the dismissal of the notion of psychogenic infertility based only on the exclusion of any organic sign, the conceptual problems have moved closer to those associated with the concept of psychosomatic illness in general medicine. To some extent, the physical and the psychological are allowed to coincide. The association between the psychosomatic and psychogenic concepts will be explored, and this will be followed by a discussion of the important issue of cause and effect which concerns both concepts.

#### The influence of psychosomatic medicine

In 1747, Glaub, a professor of medicine in Leyden, wrote that "the reason why a sound body becomes ill, or an ailing body recovers, very often lies in the mind" (Lipowski, 1977, p.234). Consideration of the mind-body problem in medicine in fact finds its roots as far back as ancient Greece. More recently, the work of Freud and those who contributed to his formulations, provided an important impetus to the recent interest in psychosomatic medicine as a valid field for scientific investigation. A strong association was seen between physical symptoms and hysterical mechanisms or depression. When these underlying factors were identified in a patient, the somatic symptoms were considered an intrinsic part of an essentially psychological disorder. Treatment at a psychological level became prescribed for relief of certain somatic symptoms. Discoveries of a psychophysiological nature by Russian and American behaviourists further contributed to the field, redirecting attention from the unconscious to the mediation of external factors

on physiological processes. This latter orientation culminated in the work of Wolff, (1953) whose theory of psychosocial 'stress' has been applied to a number of psychosomatic disorders (Lipowski, 1977; Rees, 1976). Applications of the theory of stress specifically to certain infertility conditions is illustrated by the work of Sandler (1968) and Cooper (1974).

Proponents of a specificity model in psychosomatic medicine, for example Alexander et al (1968), attempted to identify particular disorders such as bronchial asthma, ulcerative colitis, peptic ulcers etc. to which respective specific idiosyncratic childhood experiences or personality types were related etiologically. The search for specific personality characteristics to explain certain instances of infertility is a common trend, and will be illustrated in some detail at a later stage.

The complexity and importance of the psychosomatic concept has been increasingly recognized in medicine generally, and it is more difficult to specify what the label 'psychosomatic' has come to imply. The previously restricted focus on the reciprocal relationship between physical disease and individual psychological factors has been extended to include factors in the broader socio-cultural context in which individuals are situated. Lipowski (1977) describes the study of psychosomatic disorders as "a scientific discipline concerned with the study of the relationship of biological, psychological and social determinants of health and disease" (p.233). In its broadest

sense, every presenting illness or disorder is currently considered to have an important psychological component contributing to both symptomatology and cure. Whilst this aspect is generally acknowledged, the ongoing and predominant trend is application of the psychosomatic label as an explanatory model to a small group of recognized disorders which present with clear physical symptomatology, such as the ulcers and colitis previously mentioned.

Four major definitions of psychogenic infertility which appear in the literature have been briefly referred to. To recapitulate, the first applies to cases in which psychopathology is considered to potentially contribute etiologically to any form of infertile condition, no matter how gross the physiological presentation (Barglow & Peterson, 1980; Seward et al, 1965). As yet, however, infertility has not been included in the group of traditionally recognized psychosomatic conditions to which such a definition would correspond. Thus, this controversial view of infertility should not be inferred in any discussion which follows. The second definition is one of exclusion, to the extent that a diagnosis of psychogenic is only made in the absence of any physiological sign or symptom other than the fact that conception does not occur (Banks et al, 1963; Kroger & Freed, 1950; Rutherford, 1965). It is difficult to directly relate this view to psychosomatic theory in which physical symptomatology forms an integral part. The third and fourth definitions are also based on exclusion of physiological factors, but do include disturbances of the reproductive system which

manifest symptoms that are not traceable to disease processes of organic structures. In this respect, the association to psychosomatic theory is more obvious. The point of departure in these last two definitions is the nature of the suspected psychological factors. One of the definitions holds that a psychogenic diagnosis is not made unless identified psychopathological factors are present which may be related etiologically to the otherwise unexplained condition of infertility (Bos & Cleghorn, 1953; Karabasanoglu et al, 1975; Mai, 1978). A difficulty with this outlook is that existing psychopathological factors may not be apparent, even with intensive in-depth exploration. Possible reasons for this could be their potentially deep-seated nature within an interaction between two partners, or conscious efforts by certain patients to mislead the clinician for the sake of either of their egos. Furthermore, at this stage there is little agreement as to which psychopathologic factors have potential relevance with regard to the etiology of infertility (Noyes & Chapnick, 1964). The other definition assumes the likely presence of underlying psychopathology which need not be specifically demonstrated or identified for a psychogenic diagnosis to be made (Fischer, 1953; Straker, 1963).

#### The issue of cause and effect

A central conceptual difficulty with both psychosomatic and psychogenic explanatory models is the nature of the relationship between cause and effect. Almost two centuries ago, a British medical practitioner, Buchan (1797), wrote:

Barrenness is often the consequence of grief, sudden fear, anxiety or any of the passions which tend to obstruct the menstrual flux. When barrenness is suspected to proceed from affections of the mind, the person ought to be kept as easy and as cheerful as possible, all disagreeable objects are to be avoided and every method taken to amuse and entertain and fancy (p.368).

To some extent, more sophisticated levels of understanding have been reached. Convincing hypotheses with some supportive evidence have been proposed with regard to the relationship between physical signs or symptoms and psychological factors. It is beyond the scope of this discussion to present a detailed account of the proposed hypothalamic or autonomic pathways along which processes relating to the psychological and the physiological could be mediated, but these have been outlined in numerous texts dealing with infertility specifically, Bos and Cleghorn (1958), Barglow and Peterson (1980), Karabasanoglu et al (1972), Kroger (1972), Mozley (1976), Rutledge (1979), Sandler (1968) and Straker (1963), for example. The important point to note is that for a given disorder, the interactive nature of any physiological and psychological factors involved prevents the isolation of these into their respective independent factors. Thus it is impossible conceptually and practically to demonstrate in a finite way that specific psychological factors present actually caused the physiological condition. Implicit

in this interaction are, of course, in addition the socio-environmental factors which potentially contribute to the biological and psychological state of any individual.

It would be very useful indeed both diagnostically and therapeutically to demonstrate the causal relationship implied by the term psychogenic. Unfortunately, available methodological procedures do not allow such demonstrations with cases presenting with infertility. However, this has not prevented several authors in the field from overlooking conceptual difficulties. Strong claims and even dogmatic statements are found that particular psychological factors cause infertility (Benedek, 1952; Cooper, 1971; Deutsch, 1945; Seibel & Taymor, 1982). Such claims are based either on speculation, or on clinical and empirical studies of infertile patients. The potential confusion in this approach is highlighted by Deutsch (1945), who does point out that the same set of psychological factors considered to cause infertility may be found in association with other disorders, and that they are not present in all infertility cases where they would be anticipated.

Some evidence of the causal relationship between psychological factors and infertility is found documented from occurrences in the natural environment. Sperm quality has been shown to deteriorate in medical students under stress of examinations, and ovulation failure is fairly common in healthy women undergoing the stressful initial phase of a nurse's training program (Pepperell et al, 1980). Maj et al (1972) have demonstrated that a depressed androgenic activity of the testicle, with a fall in the plasmatic testosterone levels necessary



for adequate sperm productions, occurs after exposure to stressful stimuli. Their controlled study was conducted on a group of young men in officer candidate school. Certainly the most bizarre investigation of this nature was carried out by Steve (1952) who examined the testicles of men condemned for rape in which pregnancy followed, and who were awaiting execution. He found the seminal fluid to be azoospermic due to arrest of sperm maturation.

Connections such as these are impossible to demonstrate in most cases of infertility which present for medical intervention. In clinical practice, onset of impotence at the fertile phase of the respective female partners' cycle or when required to produce semen specimens for analysis or for insemination procedures, has been observed in otherwise potent men. Likewise, delayed ovulation at times of appointments for artificial insemination by donor has been found in women with otherwise regular cycles (Berger, 1980; Foldes, 1975; Palti, 1969; Rutledge, 1979; Sandler, 1968; Seibel & Taymor, 1982). The causative role of psychological factors in infertility is perhaps most obvious in cases presenting with vaginismus and secondary impotence, for example (Berger, 1980). Establishing what these factors are, is less obvious!

For an individual case or group of patients presenting with any infertility problem, psychological factors found to be present may relate to any combination of the following variables, which do not necessarily constitute an exhaustive list:

1. pre-existing psychopathology which has possibly played an etiological role in the disorder;
2. reaction to the experience of social stigma and pressures;
3. individual and interpersonal consequences for the couple resulting from unwanted childlessness;
4. reactions to medical interventions and procedures involved in a program that attempts to bring about conception;
5. reactions to the implications of a particular diagnosis (which may be final and irreversible; may relate to to organicity in the male, the female or a combination of both partners; may be inconclusive and depend on the outcome of further investigations or procedures, may be ambiguous or vague as in functional or psychogenic which again could relate to the male, female or an interaction of both);
6. length of time involved in pursuit of goal of pregnancy (with and without medical intervention).

The above discussion should lead to a realization that it is almost always impossible to firmly ascribe etiological significance to psychological factors which may be present in clinically presenting cases of infertility. Such factors are in the first instance intricately involved in an interaction with the physiological condition of infertility which in itself is capable of producing psychological reactions. Psychological factors present may further relate to the numerous possibilities listed above. For these reasons, it is more correct to

discuss psychological factors present in terms of their association with the infertility. Definitive statements with regard to their role in the etiology of infertility are not only impossible to prove in most instances, but are also possibly based on an incorrect assumption in the first place.

In reaction to these inherent conceptual difficulties, a decision has been made by some researchers to abandon altogether the distinction between organic and functional infertility, and even the very concept of psychogenic infertility. The argument for this has in part been that the functional group represents such a small percentage of the total infertility population that it does not warrant all the separate attention it has received, especially since identified psychological differences between the organic and functional groups cannot be related causally to the latter with full confidence (Bell, 1980). However, despite these problems it seems unnecessary to throw the baby out with the bathwater. The distinction between organic and functional infertility appears to be useful diagnostically on medical grounds, and psychological etiology is most likely implicated at some level to theoretically justify the concept of psychogenic infertility even though it may not be demonstrated in most cases of infertility. The functional group is commonly associated with a greater degree of psychological disturbance than the organic group in the literature, and attempts have been made to find empirical evidence for this view (Brand, 1979; Brand et al, 1982; Kipper et al, 1977; Mai et al, 1977; Marshall, 1967.). Without

necessarily implying etiology, but rather for purposes of management and psychotherapeutic intervention, it would be useful to establish psychological differences which might distinguish the functional and organic groups from one another, as well as either or both of these groups from the normal fertile population.

Psychological factors associated with infertility in literature and research in the field will be reviewed in the following chapter.

CHAPTER THREE

REVIEW OF PSYCHOLOGICAL FACTORS ASSOCIATED WITH  
INFERTILITY

General trends in the approach to identifying and studying psychological factors associated with infertility will be critically discussed in the first section of this chapter. Different theoretical models will be referred to, with illustrations of the kind of psychological factors respectively involved.

The second section looks at empirical research on the types of psychological factors previously referred to. Comments will be made on methodological procedures, with an attempt to recommend improvements in these for future research.

#### General trends and associated psychological factors

When Rachel saw that she bore Jacob no children... she said to Jacob, "Give me children or I die!" Jacob's anger was kindled against Rachel and he said, "Am I in the place of God, who has withheld from you the fruit of the womb?". Then she said, "Here is my maid Bilhah; go unto her, that she may bear upon my knees, and even I may have children through her (Genesis, 30:1).

Had Rachel prescribed a similar cure for herself as she suggested for Jacob, perhaps the will of God would have turned in their favour sooner than it eventually did! Although the essential role of spermatozoa in fertility was demonstrated by Lazzaro Spallanzani in the eighteenth century, it is only very recently that units such as the Andrology Department at Tygerberg Hospital have been established to thoroughly investigate the physiological role of the male in reproduction.

and infertility. The head of this particular unit, Dr.A.J.van Zyl', in a recent article describes the ongoing world-wide tendency to pay inadequate attention to this aspect of infertility (Van Zyl, 1980). In spite of the now recognized fact that in up to 30-40% of organic infertility cases the difficulty lies primarily with the male (Menning, 1977; Rutledge, 1979), and of evidence which has shown male fertility to be sensitive to psychological factors (Banks et al, 1963; Christie, 1978; Rutledge, 1979), inadequate attention continues to be given to the male in the literature and research on infertility. An anonymous South African obstetrician (1976) reported that in a series of childless couples he had personally encountered with infertility due to definite male organic factors, no less than 70% of the wives had been subjected to some sort of diagnostic surgical procedure before the fertility of the respective spouse had been ascertained. In a review of 16 papers published since 1950, Heiman (1962) found that not a single husband had been psychiatrically interviewed or assessed in the more than 600 couples dealt with in these reports. Benedek et al (1953) criticized the general approach as well as their own, "... as if it were tacitly assumed that man's fertility belonging to the realm of organic physiology, lies outside of the territory of psychological investigation" (p.485).

The challenging nature of psychogenic and functional infertility has resulted in a great deal of attention being focused on this particular group of infertile couples. A major input has come from the psychodynamic theorists, who

have attempted to identify individual personality characteristics associated with this group (Benedek, 1953; Deutsch, 1945; Mandy & Mandy, 1962; Rubenstein, 1951). Their focus has been almost exclusively on the female partner, and the approach is comparable to the specificity theory in psychosomatic medicine previously referred to. Christie, (1978 & 1980) roughly separates psychogenically infertile women into the following groups on the basis of depth of psychological disturbance:

1. those women where the infertility seems to disappear spontaneously, perhaps during investigation;
2. women with a more resistant block to conception seeming to derive from some external stressful situation (sensed by them as unfavourable for motherhood);
3. those women whose infertility appears to represent a deep and persisting psychosomatic defence against an inner psychic danger, that is, some internal threat to the woman's mental health posed by the prospect of conception and motherhood.

Psychodynamic work in the field relates to the third group above. Various personality 'types' have been proposed, with the general view of infertility as an unconscious dynamic defence against the experience of pregnancy and motherhood. A causal relationship between the personality disturbance and the infertility is always implied and sometimes stated, with observations and findings based on single or a small number of isolated case studies. Deutsch (1945), for example, outlined the following five personality types:



1. the immature infantile dependent child woman.
2. the maternal giving woman, whose husband absorbs all her maternal drives and feels threatened by a child.
3. the active masculine aggressive woman who rejects her femininity.
4. the woman whose dedication is to interests which exclude motherhood.
5. the emotionally ill woman who perceives the poverty of her emotional life and cannot meet the demands of motherhood (Straker, 1963, p.153).

As an extension of Deutsch's fifth type, Rubenstein (1951) saw certain cases of psychogenic infertility as a defence against the likelihood of postpartum psychosis. Consistent with certain of Deutsch's findings, Mandy and Mandy (1962) described two broad types of women whom they regarded as likely to develop reproductive disorders. Firstly, physically and emotionally immature women, and secondly aggressive and masculinely competitive women amongst whom open rejection of the feminine role could commonly be expected to occur. The shared opinions of these and a few other like-thinking authors have exerted a powerful influence in the field of infertility, and as such provide an important source for the negative stereotypes which have come to be associated with infertile women, particularly those in the psychogenic or functional groups.

Similar hypotheses regarding psychological factors of the male in psychogenic infertility have been much less discussed, and centre mainly about the occurrence of impotence. De Watteville (1957) hypothesized that spasm of the urethra or of the vas deferens resulting from psychic conflict could inhibit ejaculation, but this view remains unsubstantiated. Abse (1966)

related male psychogenic infertility to unconscious incestuous wishes and sadistic fantasies which inhibit adequate aggressive masculine identification. Gender identity conflicts are thus seen as common to the development of male and female psychogenic infertility (Mai, 1969). Straker (1963) describes male psychogenic infertility resulting from impotence as:

...the expression of resistance against the sexual act due to guilt, anxiety or hostility to the object. Fear of injury to self or others (sado-masochistic components), fears of inadequacy (fear of women, homosexual latencies, castration anxieties) or predominance of pregenital impulses are important factors (p.154).

Attempts have been made to empirically demonstrate psychological differences between functional, psychogenic and organic infertility groups, and between these and normal fertile groups. Some of these studies will be discussed in the following section. Noyes and Chapnick (1964), in a critical analysis of 75 references on the association of psychology and infertility agreed on the following points:

1. Authors assumed or stated the hypothesis that psychological factors altered fertility per se.
2. The evidence presented was scanty, poorly organized, and poorly analyzed.
3. The literature was quoted unsystematically.
4. Approximately 50 different psychological factors were said to relate psyche to fertility.
5. Conclusive evidence was found that frigidity does not decrease fertility and adoption does not increase fertility.
6. No conclusive evidence was found that a specific psychological factor can alter fertility in the normal infertile couple (p.555).

In a similar review of 80 references pertaining to psychiatric

and interpersonal factors in infertility, Mai (1969) found that of the 31 that were entirely or largely devoted to psychopathology, only 19 were clinical studies based on psychiatric interviews or psychological test data, or both. Of these 19, only 3 studied factors relating to the male, and these most inadequately.

A relatively recent and important trend presents a move away from the search for individual psychological factors in either the independent male or female partner. Increased recognition has been given to the fact that infertility of any kind takes place in the context of a couple interacting with one another and with their environment, and instead of focusing on individual psychopathology, the attention is on the interaction of the (marital) partners (Christie, 1980; Heiman, 1962; Kroger, 1962, Mudd, 1980; Rutledge, 1979). This outlook reflects the major shift that has taken place in general psychodiagnostic and psychotherapy theories from an individual to a family or systems model of understanding psychopathology. A more detailed rationale for this change in focus may be found in texts on family therapy, Bloch (1973), Haley (1978) and Minuchin (1974) for example, and is well covered by Kovel (1976, chapter 13). Christie (1980) comments that:

Infertility should always be seen as a conjugal phenomenon. As it lessens in one partner, as a result of treatment, it may increase in the other. So it is the couple who must be investigated and treated. We have to evaluate psychophysiological processes arising in two people and allow for the effect of each individual upon the other, in a particular psychosocial setting (p.229).

Unfortunately, in most areas of study in the infertility field, this important perspective has not proceeded much beyond the initial statement of the view itself. Empirical research in particular seems to be continuing in the direction of a search for individual psychopathology. A major focus of the present study has been the important interactional nature of marital relationships with regard to infertility and associated psychological factors.

This interactional aspect has perhaps been most diligently taken into account in the increasing amount of literature to have appeared recently which deals with counselling and crisis intervention for the infertile couple (Bacher, 1982; Bresnick, 1972; Mazor, 1979; Menning, 1977 & 1980). The focus has also been more prominent in the literature which focuses specifically on sexual problems between the infertile couple (Berger, 1980; Elstein, 1975; Walker, 1978). The literature in both of these cases explores problems pre-existing as well as consequent to the infertility diagnosis for a couple.

It is beyond the scope of this discussion to present a detailed account of the crisis intervention approach to infertility, which has recently been well reviewed by Bacher (1982). However, it is an important development, and certain aspects will be briefly discussed to illustrate the likely emotional experiences of the subjects to be included in the present study. Attention within the crisis intervention framework has mainly been generalized to the infertile population

as a group confronted with a more or less similar set of stresses. In line with the general crisis intervention model, a syndrome is presented of typical phases and related emotions that the infertile couple are likely to experience, starting from the initial suspicion that there is a problem, to seeking medical opinion, and facing up to the diagnosis and consequent involvement in an infertility program. Menning (1980) outlines the following basic phases, which may vary in order and intensity for the individual couple:

1. surprise
2. denial
3. anger
4. isolation
5. guilt
6. grief
7. resolution (which may be adaptive or maladaptive)

A range of additional emotions may be evoked while working through these phases: tension; anxiety; failure; disappointment; inadequacy; mistrust; fright; helplessness; hopelessness; despondency; despair; for example (Berger, 1980; Bresnick, 1981; Marbach, 1967; Menning, 1977 & 1980; Rosenfeld & Mitchell, 1979).

Individual differences in response patterns are considered in terms of pre-existing personality and relationship variables, and the different diagnostic labels which may be applied. For example, a different set of responses may be evoked by a combined and a definite male or female organic diagnosis, or by a

diagnosis that is conclusive or inconclusive. In the case of a conclusive diagnosis, the couple may be almost immediately informed that there is no hope of ever conceiving, or that the condition is relatively minor and should respond to a minimum of intervention. An inconclusive diagnosis could refer to the functional or psychogenic labels, in which case neither the doctor nor the patient has a clear understanding of the problem and its likely diagnosis, or to an organic diagnosis which could be treated indefinitely without a clear prognosis.

Within the crisis intervention model, counselling and emotional support are offered to the couple without the emphasis on psychological etiology found in much of the earlier literature. Any useful comments or observations from other approaches are incorporated into the intervention program which aims at helping the couple to work through the anticipated emotional phases. The goal of intervention is attainment of a psychologically healthy adjustment to the resolution of the infertility problem. Resolution may refer to preparation for a successful pregnancy, involvement in an artificial insemination program, adoption, or resignation to a family existence without children. To some extent, the importance of this approach has been recognized, and multi-disciplinary teams including a psychologist or a psychiatric social worker are found in certain clinics specializing in the management of infertility (Berger, 1980 & 1982; Bresnick, 1981). A local example would be the unit at Tygerberg Hospital where a full-time psychologist is employed. Unfortunately, the approach seems to have had

minimum impact in private practice, where few patients are referred specifically for psychotherapeutic intervention or support counselling, and the medical practitioners are kept far too busy by the patient-load to pay adequate attention to their emotional needs.

That the needs of infertile couples may be great is indicated by findings such as twice the number of divorces and suicides for childless couples than for those where children are present in the home (Mai /1972b; Moghissi & Wallach, 1983).<sup>et al</sup> Although the number of childless couples with an actual infertility problem is not specified in these reports, it is likely that they would represent a significant proportion of the couples at risk referred to above. It is therefore important that the search for associated psychological disturbance of infertile couples be continued, albeit that certain trends and directions in this endeavour possibly need to be reassessed. With continued effort, perhaps the hiatus outlined below by Brand et al (1981) will be reduced:

Researchers in the field of human infertility have had no consensus whether involuntary childlessness has a positive, negative or even no perceivable (influence) on the quality of a marriage relationship. The general view, however, is that when a marriage stays barren against the will of the couple, they gradually become exposed to stress that might eventually lead to marital tension (p.151).

#### Empirical investigations of psychological factors

To date there have been surprisingly few well-controlled empirical studies aimed at establishing psychological factors associated with infertility. Existing studies have mainly attempted to identify psychological factors

which could differ significantly between the fertile and infertile groups. Most often the comparison has been between a single infertile group (either functional or psychogenic, or a combined group with no attempt to distinguish between functional, psychogenic and organic infertility) and a fertile control group (Allison, 1979; Carr, 1963; Cheema, 1972; Dunne, 1976; Eisner, 1963; Mai et al, 1972; Platt et al, 1973; Richardson, 1972; Seward et al, 1965). Few studies could be found which compared a functional and an organic group (Brand, 1979; Brand et al, 1982; Kipper et al, 1977; Mai et al, 1972; Marshall, 1967), and of these an attempt to include a fertile control group was made only by Marshall and by Brand, albeit the spouses of infertile partners in the latter case.

Of the few studies found to have collected data on the male partner (Brand, 1979; Carr, 1963; Dunne, 1976; Mai et al, 1972; Marshall, 1967, Platt et al, 1973), only Marshall focused the investigation on the interactional component of the marital relationship, previously discussed, with regard to the infertility. Although information concerning the marriage has been ascertained from infertile couples in a few studies, Brand (1979), Dunne (1976) and a pilot study by Bell (1981) for example, the focus has not been on the interactional nature of the marital relationship, and none of the studies referred to included a normal control group as a point of reference. Generally, the search has been for individual psychological factors of the female partner and occasionally for individual factors of the male partner without exploring their functioning together



as an interacting unit. Perhaps in the same way that claims have been made to have identified certain individual psychological disturbances of the female and male partners respectively, an attempt could be made to demonstrate psychological disturbance on interpersonal and interactional variables between partners of infertile couples. The aims of the present study have been addressed to this issue, and have also taken into account the suggestions in the literature that a greater degree of disturbance may be found for couples diagnosed as functionally infertile than for those with a diagnosis of organic etiology.

Reported findings of empirical studies are often inconsistent or contradictory. In addition to the diagnostic and definitional problems related previously to incidence figures, the influence of which obviously applies here, there are a number of methodological procedures which could be contributing to the confusion. An absence of basic standard criteria for subject selection can prevent reliable comparisons between findings of apparently similar studies. At times the presence or absence of organicity is not stated (Allison, 1979), or organicity may be excluded for no apparent reason in a study not specifically aimed at studying a functional or psychogenic group in concept (Slade, 1982). Perhaps the most useful standard approach would be to include an organic and a functional infertile experimental group as well as a fertile control group in any attempt to identify factors associated with infertility. Even in those studies aimed at finding differences between organically and functionally infertile groups, it would be useful to include a normal fertile control group as a

point of reference. The separation of functional and organic infertility into two groups could be continued unless future research provides sufficient evidence that they are in fact best regarded as an homogenous population with respect to psychological functioning. The study reported by Brand et al (1982) suggests an additional subdivision of the organic group into those diagnosed as infertile due to male and female organic factors respectively, although their significant findings in this respect were based on very small sample sizes.

A study by Wiehe (1976) suggests that an important control factor to be taken into account when selecting subjects for research, is the length of time since an infertility diagnosis has been made or since involvement in the investigative or therapeutic procedures. Most studies have investigated cases of primary infertility. However, it should be essential to state whether or not this has been the case, as the presence of even a single biological child is likely to significantly alter the situation. Studies involving comparisons between primary and secondary infertility cases, as well as those who have adopted, present interesting but separate areas for research. Insofar as the fertile control group is concerned, fertility is not always clearly established. Fertility is at times assumed or taken as the subjects' perception of themselves, by virtue of their attendance at family planning centres together with no history of known fertility problems (Slade, 1981). A more appropriate control would seem to be couples whose fertility has been demonstrated by the birth of at least one child, as well as no history of fertility problems

(Eisner, 1963; Marshall, 1967; Seward et al, 1965). This particular group would certainly have proof of their own fertility, and would in fact represent the norm that infertile couples undergoing treatment are apparently striving to reach.

A final comment refers back to the issue of causality. Inadequate statements of the purpose or conclusions of a study may imply or create the impression that a causal relationship has been demonstrated between significant psychological findings and infertility. This serves as a powerful reinforcer of the general trend in the literature to state that particular psychological factors cause infertility, thus perpetuating some rather unfortunate and unfounded stereotypes of infertile couples.

A sample of empirical research which follows has been selected with the aim of illustrating the comments of a general nature above, as well as to provide examples of the kinds of psychological factors hypothesized, and in some cases positively shown, to identify the infertile population. A striking overall impression of research in the field has in fact been the similarity with regard to psychological factors between the infertile and fertile populations, as well as between the respective subgroups studied, rather than their differences (Seward et al, 1965). The studies have been listed in chronological order, and provide a fairly even span of work conducted in the field over the past two decades.

1. Eisner (1963) studied 20 women with a diagnosis of unexplained infertility and 20 matched fertile women using the Rorschach. All the records of the infertile women revealed more emotional disturbance. The infertile women were more schizoid, but hysterical traits were the same in both groups. The infertile women showed more conflict over their feminine role, and difficulty with female sexuality. She concluded that infertility is an emotionally disturbing condition and suggested that in some cases emotional disturbance was a causative factor.
2. Carr (1963) reported results of his study of an infertile group and a matched fertile group attending a class in conception control. Husbands and wives were interviewed and administered the MMPI. A significant difference in sexual responsiveness in favour of the fertile couples was found. The better sexual adjustment of the fertile wives was associated with better adjustment scores on the MMPI, indicating less neuroticism, dependency and manifest anxiety for the fertile than for the infertile wives.
3. Seward et al (1965) attempted to investigate a prevailing notion in the literature that underlying the infertile woman's expressed wish for a child, was a counter-acting wish to avoid conception because of her emotional immaturity. From this assumption, they derived the following hypotheses:

- a) The infertile woman should show disturbances in her feminine identity.
- b) The infertile woman should have negative attitudes towards such sexual functions as menstruation, sexual relations, pregnancy, childbirth and adoption.
- c) The infertile woman would transfer her emotional dependency from mother to husband with resulting strain and sexual inhibition.

To test these hypotheses, 41 patients with primary infertility and 41 multiparous women were studied with selected TAT pictures, the Sacks and Levy Sentence Completion Test, the Draw-a-person Test, and a personal interview exploring the relevant areas of each patient's life history. The results failed to support the hypotheses, and the researchers were struck by the similarities between the groups rather than the differences.

4. Marshall (1967) conducted her study on organically and functionally infertile and fertile groups of married couples. The infertile groups were further divided according to those who did and did not conceive during the course of her investigation. Reported findings were based on the administration of the Guildford-Zimmerman Temperament Scale and a Questionnaire which included an assessment of the marriage. The functionally infertile couples who did not conceive were found to be the most emotionally disturbed in her sample, and to show the most conflict and hostility. Conscious and

unconscious desire for children appeared to be absent for this group, whereas functional wives who conceived had been evaluated as wanting a child. The least conflict and hostility was manifested by the fertile control couples. Hostility was found to be a manifestation of unmet dependency needs and emotional immaturity, rather than a primary factor of infertility. She concluded that infertility, functional or organic, should be studied as an interacting unity of husband and wife, and found most validity in her comparisons between the infertile couples who did not conceive.

5. Mai and Rump (1972) studied 45 infertile couples and 47 fertile couples using the Neuroticism Scale Questionnaire which was administered to both husbands and wives. The prediction that infertile couples would be more neurotic than fertile couples was not confirmed. On the basis of clinical interviews of the women, they found that the infertile wives exhibited significantly more hysterical and aggressive personality disorders, and showed some ambivalence and difficulty concerning sexual relationships and sex role identity. In a further publication of their study, Mai et al (1972) reported that they had failed to establish differences in neuroticism between the organic and psychogenic infertile groups of their sample.

6. Platt et al (1973) studied 25 infertile and 15 fertile

couples using Rotter's index of locus of control, the Group Personality Projective Test of Cassel and Kahn, and an adaptation of Osgood's Semantic Differential technique to examine concepts of self and ideal self. They found that both the male and the female of the infertile couples saw the locus of control over events in their lives as being external to them. They also found that both the males and the females of infertile couples saw themselves as less similar to their ideal selves than did the controls. The females of infertile couples had greater anxiety, neuroticism, and emotional disturbance, but these factors were not found in the male. They concluded that their findings confirmed those reported by Carr that more neuroticism and anxiety exist in infertile women.

7. Allison (1979) undertook a study which explored the experience of role conflict for women in infertile couples. An experimental group of 29 infertile women and a control group of 29 married women with no history of an inability to conceive were asked to complete the Maferr Inventory of Feminine Values in terms of 'real self' and again in terms of 'ideal woman'. A form was completed by each husband of his 'ideal woman'. Role conceptions and expectations were measured from these. A Life Style Questionnaire, measuring experienced role conflict in several areas, and a routine medical history questionnaire were also completed by each woman.

A semi-structured interview was conducted with each woman, and this was designed to explore the woman's experience and view of herself, with particular emphasis on the measuring of pregnancy and parenthood, and role conceptions and conflicts. Compared to the control group, the infertile group's role conceptions were more traditional, they reported less role conflict of various kinds, and they showed greater occupational commitment. The degree of wife-husband role discrepancies of the infertile couples was at least as high as those of the fertile controls. On the basis of these findings, infertility was interpreted as a somatic defence against the overt experience of role conflict. Towards the end of her conclusion, Allison at least mentions the possibility that the husband may be instrumental in the inability of the couple to conceive, for whatever unmentioned psychological factors he may be experiencing!

8. Slade (1981) studied a group of 19 women of infertile couples with no demonstrable organic pathology in either partner, and a control group of 19 women attending a family planning clinic. (This study differs from the previous one which did not specifically exclude organic factors.) A Role Questionnaire measuring attitudes to female social roles, and a Sexual Attitude Scale were administered. No overall significant difference in social role attitudes was found, but the infertile group showed a significantly more limited range of opinion. They also reported a tendency towards more re-



strictive sexual attitudes and high levels of guilt feelings.

9. Brand et al (1982) hypothesized that a group of female functionally infertile patients would show significantly more personality maladjustment than a group with definite organic reproductive pathology and a normal fertile group. 22 functionally infertile women, 32 organically infertile women, and 5 normal women (wives of sterile men) were administered the Tennessee Self Concept Scale, IPAT, EPI, and the Personal, Home, Social and Formal Relations Questionnaire (PHSF - devised by HSRC, 1970). No fundamental differences in personality functioning were found between the organic and functional groups. Although the sample was very small, some evidence of personality disturbance emerged in the group of wives of infertile men.

#### Concluding comments

Given the problems and limitations of much of the previous research as discussed above, and the concomitant lack of clarity with respect to findings regarding the association between psychological factors and infertility, the present study has been designed to provide a contribution by redressing some of the biases and errors of earlier research. In particular it has been guided by the following parameters:

1. Equal attention to the male and female partner. This approach takes into consideration the fact that it is

in the context of a physical and emotional relationship between the two partners that either conception or infertility occurs.

2. Focus on interactional factors between the respective partners, rather than on individual psychopathology of either partner independently from the other with regard to the particular psychological dimensions on which the experimental and control groups have been compared.
3. Adequate inclusion of types of groups. Both an organically and a functionally infertile group have been included, as well as a fertile control group. Comparisons could thus be made between organically and functionally infertile couples, as well as between either of these and the fertile control group which would serve as a normal point of reference.
4. Standard and clear guidelines for selection of infertile subjects. Possible factors which could contribute to the heterogeneity within the infertile population need to be taken into account. Thus, only cases of primary infertility and only couples with no children present in the home were included in the study. To control for uniformity both in the definition of infertility and as far as possible in the experience of the subjects, a time period was stipulated for trying to conceive and for involvement in medical intervention. In the case of the former, a two-year minimum was required, and in the latter a minimum of one and a maximum of five years, for all infertile subjects.

5. Specification of selection criteria for functionally infertile subjects. In the case of the present study, functionally infertile patients were selected on the basis of a diagnosis that had been made by the respective specialist. Diagnostic criteria coincided with the broader definition based on physical signs and symptoms, as previously outlined. Patients had been aware of the puzzling nature of their condition, although the actual term 'functional' may not have been communicated. An attempt was made to draw patients from the practices of as few specialists as possible, to limit any discrepancies in diagnostic procedures and decision-making.
5. Specification of selection criteria within the organically infertile group. For the present study, the organically infertile sample was selected so that respective male and female organic factors were equally represented. In the case of each couple, only one partner had been diagnosed as organically infertile following a thorough investigation of both partners. Couples with a diagnosis attributed to a combination of organic factors between the partners are likely to represent a separate group, and it was not practically possible to extend the present study beyond the particular groups selected for investigation.
7. Specification of selection criteria for the fertile control group. In the case of the control groups of

the present study, the presence of at least one biological child between the couple provided confirmatory evidence of fertility for the researcher as well as for the couples' perceptions of themselves. Where standardized norms for fertile couples with children are available for the dimensions being investigated, it would not be as necessary to include a specific control group in the course of the investigation.

8. As a cultural norm, only married couples were included in the study.
9. The issue of causality. Conceptual problems in making finite statements with regard to a causal relationship between psychological factors and infertility have been previously discussed in some detail. Even when psychopathology may be identified for particular patients, or when psychological differences are found between individual or groups of patients diagnosed as infertile, there are numerous explanations which could possibly account for this. For example, such findings could relate to an interaction of factors such as the nature of the diagnosis, the length of time involved in intervention, the age of the couple, the particular social pressures or stigmatization, individual and interpersonal consequences for the couple resulting from unwanted childlessness etc., as well as pre-existing psychological factors which have possibly played an etiological role. The aims of the present study have

thus not been to identify psychological factors which may have caused the infertility of the particular patients investigated, but rather to establish a possible association between infertility and particular psychological factors which could contribute to an understanding of the experience of infertility without necessarily implying causality.

## CHAPTER FOUR

### PRESENT STUDY : DESIGN AND METHOD

This study was undertaken as an empirical exploration of possible psychological differences between a respective functionally infertile and organically infertile experimental group, and a fertile control group of married couples. Increased recognition has been given to the need for identification of psychological factors which may be associated with infertility, so that these may contribute to a better understanding of the condition and lead to improved management programs for infertile couples. While previous research has attempted to provide empirical support for the numerous hypotheses about those confronted with an infertility problem, the focus has been on individual psychopathology of mainly the female partner. This type of research and the underlying assumptions have been critically discussed in the preceding chapters.

For the present study, the interactional nature of the marital relationship which forms the context for fertility or infertility to occur, has been of primary importance in the selection of the particular dimensions to be investigated and of the instruments used to provide objective measures of these. Differences have been explored between the infertile sample and the fertile control group, as well as between the organic and the functional groups in accordance with a trend in the literature which associates the latter group with a greater disturbance in psychological functioning. It has not been the intention of the study to imply etiological significance in the case of positive findings of differences between the groups. Although their findings were based on small

sample sizes, Brand et al (1982) reported differences on several variables between the organically infertile women and the wives of organically infertile men investigated by them. It was thus decided to equally represent male organic and female organic factors in the organically infertile group of the present study, and to carry out additional investigations of possible differences within this sample.

The specific psychological dimension on which the couples have been assessed has been how they perceive themselves to be functioning in relation to certain interpersonal and interactional factors. Both husband and wife have been given equal attention. Firstly, their respective perceptions of global functioning as an interacting family unit were ascertained from both partners. (In the case of the infertile couples, the family unit refers to the dyadic relationship of husband and wife in an as yet childless marriage.) Perceptions were assessed on a continuum of healthy to unhealthy functioning. Taking into consideration the particular pressures and demands on the infertile couple who remain involuntarily childless, the following hypotheses were generated:

1. Ho There is no significant difference in global family/functioning on average between the infertile and fertile units.  
Ha Global family functioning will be significantly less healthy on average for the infertile units than for the fertile units.
2. Ho There is no significant difference in global family



functioning on average between the functionally and organically infertile units.

Ha Global family functioning will be significantly less healthy on average for the functionally infertile than for the organically infertile units.

3. Ho There is no significant difference in global family functioning on average between the units with infertility attributed to female organic pathology and the units with infertility attributed to male organic pathology in the organically infertile group.

Ha There will be a significant difference in global family functioning on average between the female organic and the male organic units in the organically infertile group. (Direction was not necessarily predictable, and this exploration of differences in fact amounts to a test of homogeneity within the organic sample.)

Secondly, differences between the perceptions of the respective husbands and wives were examined. It has been argued that cognitive similarity is a significant variable in interpersonal communication (Dawes et al, 1972), and that if two persons categorize events in the same manner they should be able to communicate more easily and effectively (Triandis, 1969). The converse would apply equally. Adequate communication between family members has been recognized as an important aspect of healthy family functioning (Epstein & Bishop, 1981; Haley, 1978; Minuchin, 1974). Both

communication between husband and wife and their general family functioning are thus likely to relate significantly to the extent to which their perceptions differ or are similar, particularly with regard to perception of matters directly concerning themselves and their interactions as a unit. Thus, again taking account of the potential conflicts confronting the infertile couple, the following set of hypotheses similar to those related to family functioning, were generated:

1. Ho There is no significant difference between the infertile and fertile groups on the average extent to which the perceptions of the respective husbands and wives differ.

Ha The discrepancy between the perceptions of the respective husbands and wives will be significantly greater on average for the infertile group than for the fertile group.

2. Ho There is no significant difference between the functionally and organically infertile groups on the average extent to which the perceptions of the respective husbands and wives differ.

Ha The discrepancy between the perceptions of the respective husbands and wives will be significantly greater on average for the functionally infertile group than for the organically infertile group.

3. Ho There is no significant difference between the group with infertility attributed to female organic pathology and the group with infertility attributed

to male organic pathology on the average extent to which the perceptions of the respective husbands and wives differ.

Ha There will be a significant difference between the female organic and the male organic couples within the organically infertile group on the average extent to which the perceptions of the respective husbands and wives differ.

In addition to objectively testing the above hypotheses, semi-structured interviews were conducted with two voluntary couples from each of the respective functional, male organic and female organic infertility groups. These interviews were of an exploratory nature, and aimed at eliciting subjective reports from the couples on their understanding and experience of the particular infertility problem with which they perceived themselves to be confronted.

## METHOD

### Subjects

Subjects included in the study were 48 White middle-class married couples attending a restricted number of private gynaecological practices in Cape Town. The following selection criteria were controlled for all subjects:

1. Age: Females between 20-35 years  
Males between 20-40 years
2. Education: At least a Std.8 or equivalent pass.
3. No history of psychiatric or psychological inter-

vention for either partner.

4. Assessment of female partner to be uniformly carried out at mid-follicular phase of cycle. (According to a prominent local infertility specialist, a period of depression is fairly common amongst infertile women during and up to a few days after menstruation. This may relate to recognition that the treatment program has not succeeded for that particular cycle. Mid-cycle is thus considered to be a relatively neutral phase of the cycle emotionally.)

Within the respective groups, the required number of subjects was selected according to the following criteria:

1. Functional infertility group:

- a) 16 couples diagnosed as functionally infertile by the particular consultant from whose practice they were selected. (In each case, diagnostic procedures had involved both partners, and had included a laparoscopic investigation of the female partner. Diagnosis was made on the basis of either an absence of identifiable organic cause for the infertility or of abnormal function of the reproductive system (or part of it) not attributed to definite organic cause for either partner.)
- b) Primary infertility (no biological or adopted child present in home).
- c) Goal of conception apparently of continued importance to couple.

- d) Adequate sexual exposure to have been assessed by postcoital test.
  - e) Two year minimum of unsuccessful pursuit of goal of conception.
  - f) One year minimum and five year maximum of involvement in medical consultation for infertility with investigation of both partners.
2. Organic infertility group:
- a) 8 Couples with a diagnosis of infertility attributed to identifiable organic etiology in the male partner, and 8 couples with infertility attributed to identifiable organic etiology in the female partner.
  - b) Exclusion of couples with combined male and female factors or irreversible conditions.
  - c) Primary infertility (no biological or adopted children present in home).
  - d) Goal of conception apparently of continued importance to couple.
  - e) Adequate sexual exposure to have been assessed by postcoital test.
  - f) Two year minimum of unsuccessful pursuit of goal of conception.
  - g) One year minimum and five year maximum of involvement in medical consultation for infertility, with investigation of both partners.

In the case of diagnosis of normal or impaired spermatogenesis, standard guidelines are recommended, and diagnosis should depend on several assessments repeated over a period of time

to allow for fluctuations. Standards for division of male patients into fertile and infertile groups on the basis of spermatogenesis are shown in Table 1, adapted from Brand (1979, p.23).

Table 1

Criteria for division of male spermatogenesis into fertile and infertile groups

Criteria	Fertile	Infertile
Sperm count (number of cells per ml.)	$\leq 10 \times 10^6 / \text{ml.}$	$< 2 \times 10^6 / \text{ml.}$
Forward progression (measured on 5-point scale)	$\leq 2,0$	$< 1,0$
Motility (% of travelling cells)	$\leq 30\%$	$< 10\%$
Morphology (% of normal cells)	$\leq 20\%$	$< 20\%$

Summary statistics for wives and husbands in the respective infertility groups with regard to education levels, number previously married, and means for age, duration of present marriage, years trying to conceive, years of medical intervention and number of specialists consulted, are shown in Table 2. A breakdown of these statistics for the organic infertility group into respective male organic and female organic infertility groups is shown in Table 3.

Table 2

Summary statistics for husband and wives in the respective infertility groups

	Organic Infertility		Functional Infertility	
	Husbands (N=16)	Wives (N=16)	Husbands (N=16)	Wives (N=16)
Number passed Std.8 only	4	1	3	2
Number passed Matric only	6	7	7	7
Number post- Matric educa- tion or train- ing	6	8	6	7
Mean age	31,44 yrs.	34,81 yrs.	30,69 yrs.	35 yrs.
Mean duration of present marriage	6,75 yrs.		6,38 yrs.	
Mean number of years trying to conceive	5,18 yrs.		3,81 yrs.	
Mean number of years in medical intervention	4,11 yrs.		2,91 yrs.	
Mean number of specialists con- sulted	1,79	-	-	-

Table 3

Summary statistics for wives and husbands in the respective male organic and female organic infertility groups

	Male Organic Infertility		Female Organic Infertility	
	Husbands (N=8)	Wives (N=8)	Husbands (N=8)	Wives (N=8)
Number passed Std.8 only	2	1	2	0
Number passed Matric only	3	2	3	5
Number post-Matric education or training	3	5	3	3
Number previously married	0	1	1	1
Mean age	31,25 yrs.	35,75 yrs.	31,63 yrs.	34 yrs.
Mean duration of present marriage	6,63 yrs.		6,92 yrs.	
Mean number of years trying to conceive	5,13 yrs.		5,25 yrs.	
Mean number of years in medical intervention	4,13 yrs.		4,08 yrs.	
Mean number of specialists consulted	1,88	-	1,67	-

### 3. Fertile Control Group

- a) 16 couples with no history of difficulty conceiving.
- b) At least one biological child in the home.

Summary statistics for wives and husbands in the fertile control group with regard to education levels, number previously married, and means for age, duration of present marriage and number of children are shown in Table 4.



Table 4

Summary statistics for husbands and wives in the fertile control group

	Fertile	
	Husbands (N=16)	Wives (N=16)
Number passed Std.8 only	1	1
Number passed Matric only	4	4
Number post-Matric education or training	11	11
Number previous married	0	1
Mean age	29,25 yrs.	33,69 yrs.
Mean duration of present marriage		5,9 yrs.
Mean number of children		2

### Apparatus

1. The McMaster Family Assessment Device (FAD): Version 3. The FAD was used to objectively measure perception of global family functioning. The device is a pencil and paper questionnaire consisting of seven subscales, each with a number of items which are scored by the subject on a rating scale of 1 (healthy) to 4 (unhealthy). Six of the subscales (Problem Solving, Communication, Roles, Affective Responsiveness, Affective Involvement and Behaviour Control) represent measures of specific dimensions of family functioning within the

McMaster Model, and the seventh (General Functioning) is included as a measure of general family functioning. An important aspect of the model for the present study is the interaction of the family members which produce the family system, which in turn influences the behaviour and attitudes of the members. A brief outline of the salient features of the model, together with a description of the subscales and their respective items is shown in Appendix A. The instrument was originally constructed according to Western middle-class values, and is thus suited to the present sample.

In its original form the FAD was devised for administration to any family member, children over twelve years of age included. Each family member individually rates his or her agreement or disagreement with how well an item describes their family by selecting among the four alternative responses: strongly agree, agree, disagree, and strongly disagree. The questionnaire should take approximately twenty minutes to complete. Scores of individual family members may be looked at separately or compared, or the average of the members' scores may be used as an indicator of functioning for a particular family. For the purpose of the present study, certain items have been slightly altered either to change the emphasis more towards the functioning of the husband and wife as a unit within the context of their immediate family (which may as yet be childless), or to reduce what was felt by the researcher to be the occasional ambiguity of expression. It is unlikely that the standardization of the FAD would be significantly altered by these changes. Copies of the original and altered versions,

together with instructions to subjects, are shown in Appendices B and C respectively.

The FAD is a relatively new device, as yet in the stages of final refinements with regard to scoring procedures. Thus no published studies are available for critical comment other than the original research undertaken for standardization of the instrument. This was conducted on a Canadian sample consisting of 503 members from 103 clinically presenting females and 218 families of psychology students (Epstein et al, 1983). Reliabilities, means and standard deviations of the seven scales for this sample are found in Table 5.

Table 5

Reliabilities, means and standard deviations of the seven scales of the FAD for a Canadian sample N=503)

Scale	Reliability (Chronbach's alpha)	Mean	Standard Deviation
Problem solving	0,74	2,3	0,47
Communication	0,75	2,3	0,51
Roles	0,72	2,4	0,43
Affective Responsive- ness	0,83	2,4	0,61
Affective Involvement	0,78	2,2	0,50
Behaviour Control	0,72	2,0	0,41
Feneral Functioning	0,92	2,2	0,58

Validity is suggested by a comparative study of the FADs of individuals from families which were clinically presenting and individuals from families which did not present clinically (Epstein et al, 1983). The expectation was that the former set of FADs would reflect less healthy family functioning. In every case, the non-clinical group mean was found to be lower (more healthy) than the mean for the clinically presenting group. The reported means and standard deviations of the seven FAD scales, and F ratios of differences between these two groups are found in Table 6.

Table 6

Means, standard deviations and F ratios of the differences between a clinical and non-clinical Canadian group of subjects for the seven scales of the FAD

Scale	MEAN		Standard Deviation	F
	Non-clinical (N=218)	Clinical (N=98)		
Problem Solving	2,20	2,38	0,44	15,51***
Communication	2,15	2,37	0,48	15,30***
Roles	2,22	2,47	0,39	30,25***
Affective Responsive- ness	2,23	2,42	0,57	7,03**
Affective Involvement	2,05	2,23	0,48	10,07***
Behaviour Control	1,90	2,02	0,39	5,90*
General Functioning	1,96	2,26	0,53	25,00***

F ratios all have a and 314 degrees of freedom

\*  $p < 0,02$

\*\*  $p < 0,01$

\*\*\*  $p < 0,001$

## 2. The Semantic Differential (SD)

In its original form, the SD was devised by Osgood (1952) as an objective measure of the connotative meaning of words. He expanded the technique to explore social stereotypes and attitudes. The SD technique has been used as an index of change in meaning of concepts such as 'Self' and 'Mother', for example, for individual subjects during the course of psychotherapy (Endler, 1961). In a study by Dawes et al (1972) the technique was applied as a measure of discrepancy between perceptions held by individual family members of themselves and how they were perceived by other family members respectively. These measures were reported to have provided sensitive information for tests of significant differences when the discrepancy between the perceptions of a particular combination of two family members was compared with the discrepancy between the perceptions of another combination of two family members. For example, in their particular sample they found a significantly greater discrepancy between how schizophrenic sons were seen by themselves and by their respective mothers, than between the sons and mothers of their non-clinical control families.

Osgood (1957) defined differentiation or ascribed meaning of a concept as its successive allocation to a point in the multi-dimensional semantic space from a set of given scaled semantic alternatives. The basic instrument devised to measure this is a pencil and paper questionnaire consisting of a specified concept (Self, for example) which has to be rated by the subject

on a 7-point continuum scale between a number (usually fifteen to twenty) of selected bipolar opposites (good..... bad, for example). This enables a comparison to be made on each bipolar rating or on the average and sum of rated items, when the instrument is administered to more than one individual or repeatedly to the same individual on different occasions. In this way, two concepts may be compared when rated respectively on the same chosen set of bipolar scales. Difference in meaning for two concepts, or for a single concept as perceived either by two individuals or the same individual at different times, is defined by the distance (D) between the respective positions allocated to them in the chosen semantic space represented by the particular scale used. The statistical formula used to compute this distance is:

$$D = \sqrt{\sum d^2} ,$$

where d is the difference between the ratings of an individual bipolar item of the scale (Osgood & Luria, 1954). The greater the value of D, the more distance there is between the particular ratings being compared.

Subjects find it easier to use scales which relate meaningfully to the particular construct being judged, and which make distinctions that are familiar. More importantly, relevant scales provide more sensitive measures (Heise, 1969). Constructs used for the present study were 'Self', 'Spouse', and 'How you imagine that your spouse sees you'. The twenty bipolar items of the rating scale were selected to relate meaningfully to these particular constructs. In this respect and

in terms of the aims of the study, certain items were purposefully selected to reflect interpersonal characteristics, although it was intended to use the instrument only as an indicator of differences in mutual perceptions and not as an inventory of interpersonal or self-evaluative factors for analysis. Several items have been drawn from existing interpersonal scales or inventories (Leary, 1957; Lieberman & Rosner 1976). Copies of the semantic differentials used and the instructions to subjects are shown in Appendices D, E and F respectively.

### 3. Semi-structured interview.

Respective interview schedules were drawn up for the male and female partners. A copy of each may be found in Appendices G and H respectively. The content was motivated by issues raised in the literature, areas which the researcher felt were interesting to explore, and particular questions suggested by Ford et al (1953). No attempt was made to objectify the information, the intention was rather to gain impressions in addition and possibly complementary to the objective measures. The manner in which the interviews were conducted is described in the Procedure section.

### Procedure

All subjects were contacted telephonically by the receptionist or doctor of the respective gynaecological practice attended by them. They were requested to participate in a survey of couples with children and couples unable to have them, without communication of the exact aims of the study. The following instructions were offered as a guide to the receptionists and doctors responsible for initiating the contact with their respective patients:

"As a couple, you are requested to take part in a survey on the stresses which you and couples like yourselves (who are raising children/who have been unable to have children) have to cope with. You can contribute to our better understanding of your experience by filling out a few questionnaires which take approximately 45 minutes to complete and are not concerned with very intimate details. The information will be treated with confidentiality. Should the outcome be made known, findings will be presented in group form with the identity of individual members remaining anonymous. The only condition for participation is that the questionnaires must be filled out separately by both husband and wife, who will at no stage be allowed access to one another's responses".

In addition to the above, it was made known to the infertile couples that volunteers were needed to discuss their experience in greater depth in individual informal interviews which would be arranged by a researcher conducting the survey.

With the aim of equal sample sizes, most of the subjects (39 couples) were drawn from the practice of a single gynaecologist specializing in the diagnosis and management of infertility in addition to regular patients. In general, the fertile and organic sample formed a consecutive series of consenting patients. Beginning with the first patient booked for July in the abovementioned practice, the patient list was systematically checked in sequential order, and every consecutive patient satisfying the criteria for selection, as set out under the Subjects heading, was contacted until the required number for the fertile and organic groups had consented to participate. There were no refusals in either group. Three couples



in the consecutive series had to be replaced by patients lower down the list in the fertile group. (A wife was hospitalized for delivery and a husband for a stroke before the questionnaire had been completed by the respective couples, and a foreign couple was excluded because of language difficulties.) A couple in the female organicity group was consecutively replaced when the wife conceived before completing the questionnaire. A single couple from Groote Schuur Hospital, in fact the only couple attending the outpatient infertility clinic to satisfy all the criteria for selection into the study, was included in the male organicity group. This particular couple had recently transferred from private practice.

The number of functionally infertile patients attending a practice is relatively small, and every patient satisfying the selection criteria in attendance at the above practice was contacted. There were five refusals in this group. (Two of the wives contacted felt that their marriages could not take the additional strain of participation and another communicated that she was no longer allowed to mention the subject of infertility to her husband who could thus not be approached. One of the wives refused to commit herself either way, but did not cooperate after repeated requests, and at some stage commented that she would not participate unless she could have access to the information provided by her husband. The fifth refused without giving reasons when contacted on separate occasions by both the receptionist and the doctor.) To complete the required number for the functional group, two consenting patients who satisfied the selection criteria were

drawn from each of the practices of four private gynaecologists working in nearby suburbs and among a similar patient community to the main source.

Unfortunately practical difficulties prevented both an intended double blind design as well as administration of all the questionnaires by the same person. However, it is unlikely that this would have significantly influenced the results, as the questionnaires were self-explanatory pencil and paper tests requiring minimum involvement on the part of the administrator. Wherever possible, arrangements were made for both partners to complete the questionnaires at the doctor's rooms in the presence of a particular receptionist chosen for her efficiency and excellent manner in dealing with the patients. Couples completed the questionnaires in their own time, and husbands and wives were separated so that they could not see their respective partners' responses. The receptionist was available for queries related to difficulties in understanding the questionnaire, but did not enter into discussion about the specific aims or details of particular responses. Subjects were provided with an envelope marked 'Confidential', and immediately on completion all forms were sealed in these and collected by the receptionist who returned them unopened to the researcher. Questionnaires were completed in the presence of the researcher at the homes of subjects who had transport or other difficulties which prevented them from coming to the rooms. In the case of a few subjects who were unable to come in, or to specify a time when they would be available at home, the questionnaires were sent with a stamped and addressed envelope for posting

which could be sealed and returned immediately on completion. This procedure was only carried out when the questionnaires of the respective spouse were already in the possession of the receptionist or researcher. All efforts were made to encourage the couples to respond as honestly as possible, without fear of offending their respective partners.

All subjects were requested to complete the FAD and the three SD Scales, one for each of the respective constructs of 'Self', 'Spouse', and 'How you imagine that your spouse sees you'.

For each partner, D scores were computed for the discrepancy between the ratings on the SD s of:

1. 'Self' and how each was rated by the respective partner on the 'Spouse' construct.
2. 'How you imagine your spouse sees you' and how each was actually rated by the respective partner on the 'Spouse' construct.

These D scores provided an indicator of the discrepancies in mutual perceptions between respective partners. The full range of possible D scores for the particular SD Scale devised for the present study was computed and found to be from 0 to 26,8. Within this range, on average the D scores were expected to be higher for the functional and organic infertility groups than for the fertile control groups. The highest scores on average were expected for the functionally infertile subjects.

The design of this part of the study was a 2X3 design comprising the two experimental groups and the control group, and scores of husbands and wives in case an interesting pattern of differences would emerge between them across the groups. Using the scores of husbands and wives, two way analyses of variance (ANOVAS) were respectively conducted for the D scores derived from the two combinations of the constructs as outlined above, to ascertain if the discrepancies between the respective partners differed significantly according to the expectations between the groups. Because the subjects were husbands and wives, this factor (B) necessitated a repeated measures design for dependent samples. In addition to the analyses of the actual D scores, two way ANOVAS of the above design were conducted on four individual bipolar items of the SD scale which were specifically selected for their association in the literature with the experience of infertility. Those items pertaining to self satisfaction, importance of a career, children, and anxiety were chosen.

The seven FAD scales are scored independently. In the case of each of the respective scales, higher scores (less healthy) were expected on average for the husbands and wives of the functional and organic infertility groups than for the fertile controls. The highest scores on average were expected for the functional husbands and wives. Because the scores are in fact based on perceptions of how the respective partners see themselves to be functioning as an interacting unit, it was decided to compare the discrepancies between the respective husbands and wives scores across the groups. Predictions consistent with those set out above for the size of the D scores for husbands and wives in the respective groups were

made for the discrepancies between the FAD scores of respective husbands and wives across the groups. A greater discrepancy was expected on average between the scores of husbands and wives in the experimental groups than in the control group. The greatest discrepancy was expected between the husbands and wives of the functionally infertile group.

The design for this part of the study was again a 2X3 design as set out above. In this way, differences of husbands and wives respectively could be compared between the three groups, as well as the differences (discrepancies) between the respective husbands and wives. Again, using the scores of husbands and wives (Factor B), ANOVAS with repeated measures as outlined above were respectively conducted for each of the seven FAD scales, to ascertain if the scores for husbands and wives respectively differed significantly according to the expectations between the groups, as well as between the respective husbands and wives across the groups. The FAD scores were further analysed for differences between the three groups by conducting a series of one-way ANOVAS for independent samples for the seven scales, using the mean rating of husband and wife in each respective couple.

In addition to the above analyses, an identical set of operations was conducted, but using a 2X2 design, to ascertain differences between the male organic and female organic infertility groups and between the respective husbands and wives. In the case of comparisons between the two organic groups, using the mean rating of husband and wife in each respective couple, Student's t-tests

for independent samples were carried out for each of the FAD scales. No particular directions were predicted for the analyses between the organic groups.

A diagrammatic representation of the basic 2X3 and 2X2 designs of this study, showing factors and all sizes, are found in Figures 3 and 4 respectively.

Prior to performing each of the above operations, all samples to be compared were tested for homogeneity of variance, using the Hartley F max Test. In each case, differences were found to be non-significant at least at the 0,05 level of probability.

(The expert advice of Lester Gilbert, M.Sc. (U.C.T.) and Samuel E.Krug, Executive Director for IPAT was consulted with regard to the statistical analyses of the empirical data for the present study.)

		FACTOR A		
		Fertile	Organically infertile	Functionally infertile
FACTOR B	Wives	N = 16	N = 16	N = 16
	Husbands	N = 16	N = 16	N = 16

Figure 3  
Basic 2X3 design of present study

	Infertile: Male organic factor	Infertile: Female organic factor
Wives	N = 8	N = 8
FACTOR B		
Husbands	N = 8	N = 8

Figure 4  
Basic 2X2 design of the present study.

From those patients who were willing to participate in the semi-structured interviews, two couples from each of the respective male organic, female organic and functional infertility groups were selected on the recommendation of the receptionist or doctor concerned. Selection was made on the basis firstly of a willingness on the part of both partners to discuss their experience, and secondly, of couples who would be able to provide an articulate account. The final selection included couples under the care of three different practitioners, and this provided some insight into more generalized trends with regard to patterns of medical intervention. Taking into consideration reports by Berger (1977) that the most reliable and detailed information from infertile couples may be ascertained by separate and same-sexed interviews for the respective partners, a venue was chosen which provided two comfortable rooms that were well separated and completely private from one another. (A private clinical psychologist's consulting rooms in a fairly informal setting were used.)

In each case, an appointment was made at the same time for the respective husband and wife, who were separated for the actual interviews. Husbands were interviewed individually by a male and wives individually by a female interviewer respectively. Both interviewers were trained in interview skills and had post-graduate qualifications in Psychology. An attempt was made to create a relaxed and informal atmosphere. Coffee was served, and a few minutes were spent talking together generally before separating for the actual interview which lasted approximately two hours. To engender a feeling of trust and openness, an exact copy of the interview schedule was given to each interviewee at the onset. As much time as necessary was spent with the couple together for debriefing at the end. All interviews were conducted by the same interviewers, who made notes during the interviews of all that was said, and spent time together to discuss the combined information immediately after each respective couple had left the consulting rooms.

From the subjective responses to the interviews, an attempt has been made to extract and categorize response common to the experiences of the subjects, rather than to examine the accounts individually. These categories, together with additional qualitative information which could not be categorized, are presented in the Results chapter.

All subjects included in the study were informed that general findings of the survey would be made available in some form (possibly by letter or telephonically) to those who made



enquiries through a particular receptionist towards the end of the current year.

## CHAPTER FIVE

### PRESENT STUDY: RESULTS

In this chapter, results of the statistical analyses of the empirical data will be presented firstly. As previously mentioned, there were two basic designs, a 2X3 design for husbands and wives in the respective organic and functional infertility experimental groups and the fertile control group, and a 2X2 design for husbands and wives in the respective male and female organic infertility groups. A series of statistical operations were conducted on the ratings of the respective husbands and wives for the seven scales of the McMaster Family Assessment Device (FAD) and for the three concepts of the Semantic Differential (SD), both of which had been adapted for the present study.

Results pertaining to the 2X3 design (i.e. the full sample) will be reported first, and in the following order of presentation:

Two way ANOVAS with repeated measures on factor B (husbands and wives), for the seven scales of the FAD;

One way ANOVAS for independent samples on the mean rating of husband and wife in each respective couple on the seven scales of the FAD;

Two way ANOVAS with repeated measures on factor B (husbands and wives), for the two computations of D scores derived from the SD technique;

Two way ANOVAS with repeated measures on factor B (husbands and wives), for four individual items of the SD scales.

Results pertaining to the 2X2 design (i.e. the respective male and female organic infertility groups) will then be reported, in the following order of presentation:

Two way ANOVAS with repeated measures on factor B (husband and wives), for the seven scales of the FAD; Student's t-tests for independent samples, on the mean rating of husband and wife in each respective couple on the seven scales of the FAD;

Two way ANOVAS with repeated measures on factor B (husbands and wives), for the two computations of D scores derived from the SD technique;

Two way ANOVAS with repeated measures on factor B (husbands and wives), for four individual items of the SD scale.

Information resulting from the semi-structured interviews will then be presented under the general headings of 'Historical' and 'Attitudinal'. The number of subjects who gave particular responses will be indicated for each category, with the use of verbatim accounts to illustrate certain typical or extreme responses. Certain types of more qualitative information which could not be categorized will be presented in more detail. The emphasis has been to report interesting trends across subjects, rather than detailed accounts of the individual experience of each subject interviewed.

#### Statistical analyses of the full sample

Means and standard deviations of the wives and husbands in

the fertile control and the organic and functional infertility groups for the seven scales of the FAD can be found in Tables 7a and b respectively. A summary of the ANOVA summary tables of differences between the groups (factor A), differences between husbands and wives (factor B) and their interaction can be found in Table 8.

Table 7a

Means and standard deviations of wives in the fertile control and the organic and functional infertility experimental groups for the seven scales of the FAD.

FAD Scale	WIVES		
	Fertile $\bar{x}$ SD	Organic $\bar{x}$ SD	Functional $\bar{x}$ SD
Problem Solving	1,59	1,74	1,66
	0,42	0,34	0,38
Communication	1,56	1,78	1,73
	0,31	0,41	0,42
Roles	2,00	1,89	1,89
	0,28	0,33	0,33
Affective Responsiveness	1,67	1,63	1,62
	0,43	0,48	0,47
Affective Involvement	1,80	1,83	1,75
	0,37	0,36	0,45
Behaviour Control	1,55	1,72	1,84
	0,22	0,35	0,38
General Functioning	1,54	1,53	1,52
	0,36	0,34	0,27

Table 7b

Means and standard deviations of husbands in the fertile control and the organic and functional infertility experimental groups for the seven scales of the FAD.

FAD Scale	HUSBANDS					
	Fertile	$\bar{X}$ SD	Organic	$\bar{X}$ SD	Functional	$\bar{X}$ SD
Problem Solving	1,75		1,95		1,78	
	0,37		0,34		0,33	
Communication	1,80		1,99		1,78	
	0,48		0,42		0,46	
Roles	1,86		1,99		1,93	
	0,30		0,31		0,27	
Affective Responsiveness	1,84		2,07		1,88	
	0,46		0,49		0,47	
Affective Involvement	1,73		1,97		1,87	
	0,35		0,39		0,30	
Behaviour Control	1,69		1,80		1,78	
	0,39		0,25		0,36	
General Functioning	1,64		1,78		1,58	
	0,43		0,40		0,31	

Table 8

Summary of ANOVA summary tables of difference between experimental and control groups (factor A), differences between husbands and wives (factor B), and their interaction for the seven scales of the FAD.

FAD Scale	F (A) df 2, 45	MS (swq)	F (B) df 1, 45	F (AB) df 2, 45	MS (Bxswq)
Problem Solving	1,44	0,17	6,64*	0,15	0,09
Communication	1,27	0,26	7,19*	0,84	0,10
Roles	0,07	0,12	0,00	2,23	0,06
Affective Responsiveness	0,34	0,28	13,48**	0,99	0,15
Affective Involvement	0,79	0,19	1,07	1,10	0,09
Behaviour Control	1,92	0,16	1,07	1,47	0,06
General Functioning	0,54	0,17	5,03*	0,98	0,08

\*  $p \leq 0,05$     \*\*  $p \leq 0,01$

Table 8 shows that significant results were found for factor B (differences between husbands and wives) on the Problem Solving, Communication, Affective Responsiveness and General Functioning scales of the FAD. (Individual items to illustrate these scales are listed below.) As there were no significant interaction effects, it can be concluded from an examination of cell means

(see Tables 7a and b) that on average husbands in the experimental and control groups rated the functioning of their respective family units higher (less healthy) than their wives did on the abovementioned scales.

No significant results were found between the experimental and control groups (factor B) for either the husbands or the wives respectively.

Individual items which illustrate the scales on which significant differences were found between husbands and wives are:

Problem Solving:

We usually act on our decisions regarding problems.

We resolve most emotional upsets.

Communication:

We don't talk to each other when we are angry.

We talk to each other directly rather than through go-betweens.

Affective Responsiveness:

We are reluctant to show our affection for each other.

Tenderness takes second place to other things in our family

General Function:

We avoid discussing our fears and concerns.

There are lots of bad feelings in the family.

(A complete list may be found in Appendix A).



A summary of means, standard deviations and F ratios of differences between the experimental and control groups, for the seven scales of the FAD scored on the mean rating of husband and wife in each respective couple, can be found in Table 9.

Table 9

Summary of means, standard deviations and F ratios of differences between experimental and control groups for the seven scales of the FAD scored on the mean rating of husband and wife in each respective couple.

FAD Scale	Fertile $\bar{x}$ SD	Organic $\bar{x}$ SD	Functional $\bar{x}$ SD	F df 2, 45
Problem Solving	1,67 0,32	1,84 0,30	1,72 0,27	1,43
Communication	1,68 0,35	1,88 0,38	1,75 0,35	1,29
Roles	1,93 0,21	1,94 0,28	1,90 0,25	0,08
Affective Responsiveness	1,75 0,35	1,85 0,40	1,75 0,37	0,34
Affective Involvement	1,76 0,28	1,90 0,33	1,81 0,31	0,81
Behaviour Control	1,61 0,27	1,76 0,27	1,81 0,31	1,97
General Functioning	1,59 0,32	1,66 0,32	1,55 0,23	0,53

It can be seen that no significant differences were found for any of the FAD scales when comparisons were made between the experimental and control groups on the mean rating of husband and wife in each respective couple.

Means and standard deviations of the husbands and wives in the fertile control and the organic and functional experimental groups for the D scores derived from the SD technique, can be found in Table 10. A summary of the ANOVA summary tables of differences between the groups (factor A), differences between husbands and wives (factor B) and their interaction can be found in Table 11.

Table 10

Means and standard deviations of husband and wives in the fertile control and the organic and functional infertility experimental groups for the D scores derived from the SD technique .

WIVES			HUSBANDS		
Fertile $\bar{x}$ SD	Organic $\bar{x}$ SD	Function- al $\bar{x}$ SD	Fertile $\bar{x}$ SD	Organic $\bar{x}$ SD	Function- al $\bar{x}$ SD
(Self)x - (Spouse)y *					
7,70	8,29	7,47	8,11	8,26	7,50
2,34	2,36	1,47	1,90	2,53	1,97
(Spouse)y - (Imagined spouse's rating of oneself)x *					
7,91	8,60	7,38	8,14	8,56	8,50
2,34	2,86	1,75	2,07	2,55	1,85

\* Combinations of SD constructs for D, where x = rated by subject and y = rated by the respective partner.

Table 11

Summary of ANOVA summary tables of differences between experimental and control groups (factor A), differences between husbands and wives (factor B) and their interaction for the D scores derived from the SD technique.

F (A) df 2, 45	MS (swq)	F (B) df 1, 45	F (AB) df 2, 45	MS (Bxswq)
(Self)x - (Spouse)y *				
0,74	6,72	0,19	0,20	2,32
(Spouse)y - (Imagined spouse's rating of oneself)x *				
0,52	7,27	1,53	0,97	3,03

\* Combinations of SD constructs for D, where x = rated by subject and y = rated by the respective partner.

Table 11 shows that no significant differences were found for either combination of the SD constructs when the respective D scores were compared for husbands and wives respectively between the experimental and control groups (factor A), or when comparisons were made between the respective husbands and wives (factor B).

A summary of the ANOVA summary tables of differences between the experimental and control groups (factor A), differences between husbands and wives (factor B) and their interaction, for ratings of the respective constructs of 'Self', 'Spouse' and 'How you imagine that your spouse sees you', on four individual bipolar items of the SD scale respectively, are shown in Table 12.

Table 12

Summary of ANOVA summary tables of differences between experimental and control groups (factor A), differences between husbands and wives (factor B) and their interactions for ratings of constructs on individual bipolar items of the SD scale.

Construct	F (A) dt 2, 45	MS (swq)	F (B) dt 1, 45	F (AB) dt 2, 45	MS (Bxswq)
I am a self-satisfied person -----			I am a dissatisfied person		
Self rating	1,23	2,04	0,44	0,88	2,35
Rated by spouse	2,24	2,18	1,21	0,43	2,50
Self rating- rated by spouse	1,35	2,37	0,25	1,29	1,08
A career is important to me -----			A career is not important to me		
Self rating	1,40	2,48	37,89**	0,57	3,64
Rated by spouse	0,60	2,24	71,34**	1,58	2,31
Self rating- rated by spouse	0,06	1,28	18,04**	2,02	1,12
I would choose at least one child in my marriage -----			I would choose to have no children in my marriage		
Self rating	0,01	0,77	3,19	0,11	0,64
Rated by spouse	0,12	0,59	2,67	0,69	0,32
Self rating- rated by spouse	0,61	0,89	4,76*	0,63	0,26
I am an anxious person -----			I am not an anxious person		
Self rating	0,62	3,09	0,57	1,54	4,07
Rated by spouse	1,10	3,93	3,50	3,13	3,86
Self rating- rated by spouse	0,14	2,04	0,76	0,03	2,71

\*  $p \leq 0,05$ \*\*  $p \leq 0,01$

From Table 12 it can be seen that significant results were found for factor B (differences between husbands and wives) on the self ratings, the ratings of subjects by their respective spouses, and on the difference between subjects' self ratings and how they were rated by their respective spouses, for the item pertaining to career. On average both husbands and wives respectively recorded lower ratings (more importance placed on career) for the husbands than for the wives with regard to both self ratings and ratings for the respective spouse. Discrepancies between subjects' self ratings and how they were rated by the respective spouses was greater on average in the case of the wives than of the husbands. Thus, husbands and wives both felt that a career is more important to the husbands. However, there was less agreement between husbands and wives as to the exact importance of a career to the wives, than there was between them with regard to the importance of a career to the husbands.

Further significant differences for factor B were found in the discrepancies between subjects' self ratings and how they were rated by their respective spouses for the item pertaining to children. Although on average both husbands and wives rated themselves and one another much more strongly in the direction of wanting rather than not wanting a child in the marriage, there was greater agreement between them with regard to exactly where the wives were placed on the rating scale than there was with regard to the husbands. This difference was generally accounted for by a few couples in which the wife imagined her respective husband to be wanting a child more than

the husband in fact decided for himself.

Since there were no significant interaction effects, the above findings relate to differences between husbands and wives in the control and in both the experimental groups. No significant differences were found between the experimental and control groups (factor A) for either the husbands or the wives respectively.

Statistical analyses of the male organic and female organic infertility groups.

Means and standard deviations of the husbands and wives in the respective male organic and female organic infertility groups for the seven scales of the FAD can be found in Tables 13a and b. A summary of the ANOVA summaries of differences between the groups (factor A), differences between husbands and wives (factor B) and their interaction can be found in Table 14.

Table 13a

Means and standard deviations of wives in the male organic and female organic infertility groups for the seven scales of the FAD.

WIVES		
FAD Scale	Male Organic $\bar{x}$ SD	Female Organic $\bar{x}$ SD
Problem Solving	1,65 0,31	1,83 0,36
Communication	1,76 0,43	1,79 0,42
Roles	1,80 0,34	1,98 0,29
Affective Responsiveness	1,52 0,47	1,73 0,50
Affective Involvement	1,87 0,41	1,79 0,33
Behaviour Control	1,70 0,36	1,75 0,35
General Functioning	1,51 0,34	1,56 0,37

Table 13b

Means and standard deviations of husbands in the male organic and female organic infertility groups for the seven scales of the FAD.

HUSBANDS		
FAD Scale	Male Organic $\bar{x}$ SD	Female Organic $\bar{x}$ SD
Problem Solving	1,87 0,41	2,02 0,27
Communication	1,91 0,33	2,07 0,50
Roles	2,02 0,39	1.96 0,22
Affective Responsiveness	1,98 0,62	2,17 0,32
Affective Involvement	1,79 0,40	2,14 0,31
Behaviour Control	1,88 0,29	1,72 0,20
General Functioning	1,72 0,39	1,84 0,42



Table 14

Summary of ANOVA summary tables of differences between the male organic and female organic infertility groups (factor A), differences between husbands and wives (factor B) and their interaction for the seven scales of the FAD.

FAD Scale	F (A) df 2, 24	MS (swq)	F (B) df 1, 45	F (AB) df 2, 45	MS (Bxswq)
Problem Solving	1,33	0,17	5,51*	0,05	0,06
Communi- cation	0,24	0,30	5,95*	0,61	0,06
Roles	0,14	0,17	2,26	3,32	0,04
Affective Responsive- ness	0,97	0,32	10,41**	0,00	0,15
Affective Involve- ment	0,63	0,23	4,02	11,29**	0,04
Behaviour Control	0,12	0,15	1,27	2,63	0,03
General Function- ing	0,28	0,22	6,80*	0,15	0,07

\*  $p \leq 0,05$     \*\*  $p \leq 0,01$

It can be seen from Table 14 that significant results were found for factor B (differences between husbands and wives) on the Problem Solving, Communication, Affective Responsiveness and General Functioning scales of the FAD. (Individual items to illustrate these scales are found listed below.) As there were no significant interaction effects, it can be concluded from an examination of cell means (see Tables 13a and 13b) that on average husbands in both the male organic and female organic groups rated the functioning of their respective family units higher (less healthy) than did their respective wives on the abovementioned scales.

Significant interaction effects were found on the Affective Involvement scale. (See list below for illustrative items.) On analysis of the Simple Main Effects (SME), the only significant difference was found between husbands and wives (factor B) in the female organic group. Examination of cell means shows that on average husbands in this group rated the functioning of their respective family units higher (less healthy) on this particular dimension than their wives did.

No significant results were found between the male and female organic groups (factor A) for either the husbands or wives respectively.

Individual items which illustrate the scales on which significant differences were found between husband and wives are:

Problem Solving:

We usually act on our decisions regarding problems.

We resolve most emotional upsets.

Communication:

We don't talk to each other when we are angry.

We talk to each other directly rather than through go-betweens.

Affective Responsiveness:

We are reluctant to show our affection for each other.

Tenderness takes second place to other things in our family.

Affective Involvement:

We are too self-centred.

We get involved with each other only when something interests us.

General Functioning:

We avoid discussing our fears and concerns.

There are lots of bad feelings in the family.

(A complete list is shown in Appendix A.)

A summary of means, standard deviations and t values of differences between the respective male and female organic infertility groups for the seven scales of the FAD, scored on the mean rating of husband and wife in each respective couple, can be found in Table 15.

Table 15

Summary of means, standard deviations and t values of differences between the male organic and female organic infertility groups, for the seven scales of the FAD scored on the mean rating of husband and wife in each respective couple.

FAD scales	Male Organic $\bar{x}$ SD	Female Organic $\bar{x}$ SD	t dt 14
Problem Solving	1,76 0,30	1,92 0,28	1,16
Communication	1,84 0,33	1,93 0,44	0,48
Roles	1,91 0,36	1,97 0,20	
Affective Responsiveness	1,75 0,47	1,95 0,33	0,97
Affective Involvement	1,83 0,39	1,97 0,27	0,80
Behaviour Control	1,78 0,31	1,74 0,24	0,34
General Functioning	1,61 0,30	1,70 0,36	0,55

All the above are two-tailed tests.

Table 15 shows that no significant differences were found when comparisons were made between the respective male organic and female organic infertility groups on the mean rating of husband and wife in each respective couple.

Means and standard deviations of the husbands and wives in the respective male organic and female organic infertility groups for the D scores derived from the SD technique can be found in Table 16. A summary of the ANOVA summary tables of differences between the groups (factor A), differences between husbands and wives (factor B) and their interaction is shown in Table 17.

Table 16

Means and standard deviations of husbands and wives in the male organic and female organic infertility groups for the D scores derived from the SD technique.

WIVES		HUSBANDS	
Male Organic $\bar{x}_{SD}$	Female Organic $\bar{x}_{SD}$	Male Organic $\bar{x}_{SD}$	Female Organic $\bar{x}_{SD}$
(Self)x	--	(Spouse)y *	
7,66	8,92	8,22	8,29
1,25	3,00	2,20	2,97
(Spouse)y - (Imagined spouse's rating of oneself)x *			
8,11	9,08	8,43	8,69
2,58	3,20	2,65	2,62

\* Combination of SD constructs for D, where x = rated by subject and y = rated by the respective partner.

Table 17

Summary of ANOVA summary tables of differences between the male organic and female organic groups (factor A), differences between husbands and wives (factor B) and their interaction, for the D score derived from the SD technique.

F (A) df 1, 14	MS (swq)	F (B) df 1, 14	F (AB) df 1, 14	MS (Bxswq)
<hr/>				
(Self)x		-	(Spouse)y *	
<hr/>				
0,34	10,28	0,00	1,37	2,08
<hr/>				
(Spouse)y		-	(Imagined spouse's rating of oneself)x*	
<hr/>				
0,25	12,31	0,00	0,33	3,10
<hr/>				

\* Combination of SD constructs for D, where x = rated by subject and y = rated by the respective partner.

From Table 17 it can be seen that no significant differences were found for either combination of the SD constructs, when the respective D scores were compared for husbands and wives respectively between the male and female organic infertility groups (factor A), or when comparisons were made between the respective husbands and wives (factor B).

A summary of the ANOVA summary tables of differences between the respective male organic and female organic infertility groups (factor A), differences between husbands and wives (factor B) and their interaction for ratings of the respective constructs of 'Self', 'Spouse', and 'How you imagine that your spouse sees you' on four individual bipolar items of the SD scale respectively are shown in Table 18.

Table 18

Summary of ANOVA summary tables of differences between the male organic and the female organic groups (factor A), differences between husbands and wives (factor B) and their interaction for ratings of constructs on individual bipolar items of the SD scale.

Construct	F (A) dt 1, 14	M (swq)	F (B) dt 1, 14	F (AB) dt 1, 14	MS (Bxswq)
I am a self-satisfied person ----- I am a dissatisfied person					
Self rating	1,16	2,71	0,40	0,18	2,81
Rated by spouse	0,00	2,57	0,49	0,12	4,11
Self rating- rated by spouse	2,93	3,46	0,81	0,36	1,38
A career is important to me ----- A career is not important to me					
Self rating	0,04	3,20	14,51**	0,03	4,17
Rated by spouse	0,42	1,87	12,08**	0,01	2,82
Self rating rated by spouse	0,02	1,51	0,57	1,12	1,37
I would choose to have at least one child in my marriage ----- I would choose to have no children in my marriage					
Self rating	0,45	0,62	0,36	0,36	0,78
Rated by spouse	0,95	0,53	0,95	2,14	0,53
Self rating- rated by spouse	0,43	1,82	4,07	0,16	0,19
I am an anxious person ----- I am not an anxious person					
Self rating	9,74**	1,55	0,00	0,44	4,57
Rated by spouse	0,65	3,92	2,31	0,97	3,91
Self rating- rated by spouse	1,20	3,16	0,13	3,26	2,16

\* p &lt; 0,05

\*\* p &lt; 0,01

Table 18 shows that significant differences were found for factor B (differences between husbands and wives) on the self-ratings and on the ratings of subjects by their respective spouses, for the item pertaining to career. These results are to be expected in view of the differences found for these particular dimensions between the husbands and wives of the full sample. Findings relate to the general agreement between husbands and wives that greater importance of a career is ascribed to husbands than to their wives.

Further significant differences were found for factor A (differences between the respective male and female organic infertility groups) on the self ratings for the item pertaining to anxiety. Since there are no significant interaction effects, it can be concluded that on average both husbands and wives in the group of couples with a diagnosis of infertility ascribed to male organic factors, rated themselves lower (more anxious) than the husbands and wives in the group with infertility ascribed to female organic factors.

#### Information regarding the semi-structured interviews

F = Subject from couple with diagnosis of functional infertility.

OF = Subject from couple with diagnosis of infertility ascribed etiologically to organic factors of the female partner.

OM = Subject from couple with diagnosis of infertility ascribed etiologically to organic factors of the male partner.

#### Historical

##### Family of origin

No particular patterns are apparent for either the husbands or the wives. The full spectrum of positive and negative



aspects of families are found throughout the sample.

1. Divorce: Parents of 1 wife (F) divorced. (Same subject with psychiatrically treated mother and brother.)

Parents of 1 husband (F) divorced. (Subject husband of above, and also has mother with psychiatric diagnosis.)

2. Psychiatric: Mothers of 2 wives (F: depression with alcohol abuse; OF: manic depressive) and 1 husband (F).

Brother of 1 wife (F: diagnosis unknown).

Fathers of 2 husbands (OF: suicide; OM: violent outbursts and depression .)

Brother of 1 husband (OF: suicide). (Same subject whose father committed suicide.)

Sister of 1 husband (OM: personality disorder). (Same subject with violent father.)

3. Infertility: Paternal aunt of 1 wife (OM ).

Sister of 1 husband (F) apparently functionally infertile for three years after which conceived two sons without significant intervention. (Same subject with divorce and psychiatric disturbance in family.)

Previous marriages Wives: 1 wife (OF) whose current marriage is her third.

Husbands: 1 husband (OF). (Husband of above subject.)

Psychiatric history Wives: 2 with diagnosable disorders (OM: epileptic; OF: migraines.)

Husbands: 1 with earlier history (F:

Psychotic episode related to drug abuse; social adjustment problems). (Same/ subject with family history.)

### Sexual history

1. Premarital: 5 wives had sexual intercourse premaritally. (2 Fs; 2 OMs; 1 OF). However, for all 5, the only premarital experience was with their future husbands. (Husband of first marriage in case of OF subject.) All 6 wives may thus be viewed theoretically as 'virgins' with regard to broader categories of sexual experience up to the time of marriage.

All husbands engaged in premarital intercourse. Other than 1 subject (OF) who had experiences with only one partner (not his future wife), the rest had several partners each, but differed in reports of frequency, exact number, duration and intensity of emotional involvement of these contacts.

2. Marital adjustment pre-diagnosis of infertility: (not applicable to the OF subjects who knew in advance that they would struggle to conceive)

2 Wives (F; OM) reported their adjustment at best to have been only reasonably satisfying. 1 wife (OM) reported intrusion into her sexual relationship of other problems which related to difficulties in adjusting to married life. 1 wife (F) reported a positive and healthy adjustment.

Both F and both OM husbands reported early adjustment to have been very satisfactory.

3. Marital adjustment post-diagnosis of infertility: All but one wife (OF) reported periods of difficulty, varying in intensity

and duration. In particular, the other OF wife reported a decidedly maladaptive relationship during the first year of marriage. The husband of the OF wife who reported no difficulties, felt that from the start there has been an ongoing imbalance in the marriage, in that his wife has always been more satisfied than he by the quality and frequency of their sexual relationship. The other OF husband reported the same initial difficulties referred to by his wife.

4. Contraceptives: 5 wives had taken the 'pill' at some stage for varying lengths of time, and between them had used a range of other methods including rhythm, copper-T, foam and injections, again for varying lengths of time. Several reported changes for reasons of negative side-effects. The OF wife who reported no pre-marital sexual contact has not used contraceptives at any stage.

Husbands tended to leave this up to their wives. 2 husbands (OM; OF) had never taken responsibility for contraceptive measures.

5. Extramarital relationships: 1 wife (OF)

1 husband (OF)

6. Homosexual encounters:  
adolescent experimentation.

1 wife (F) described typical

No husband had any homosexual experience.

7. Menstrual syndrome: 3 wives (2 Fs; OM) reported the experience of regular bouts of depression with crying and withdrawal during menstruation and for a few days before for 1 (F), and after for all.

#### Medical intervention

1. Wives; F subject: 3 gynaecologists consulted; 1 laparoscopy; 1 postcoital test; chemical stimulation; Acupuncture. (Subject with disturbed family history.)

F subject: 1 gynaecologist consulted; laparoscopy; numerous postcoital tests; chemical stimulation.

OF subject: 2 gynaecologists consulted; 1 laparoscopy;

OF subject: 2 gynaecologists consulted; numerous D&Cs; 3 laparoscopies; chemical stimulation.

OM subject: 3 gynaecologists consulted over a time period of almost a year; 1 D&C; fertility drugs prescribed. (All treatment and investigations of this subject have been stopped since diagnosis of her husband who was only brought in for investigation a year after his wife first presented.)

OM subject: 2 gynaecologists consulted; 1 laparoscopy; numerous postcoital tests; chemical stimulation; Acupuncture.

2. Husbands: F subject: Early investigation; findings within normal range.

F subject: Investigation after ± two years of wife's initial presentation; encouraged to give up excessive jogging for low sperm count.

OF subject: Investigated ±three years after

couple had failed to conceive (wife was under treatment for known condition over this period); brief period of chemical treatment for low morphology.

OF subject: Investigated +3 years after wife's first presentation; 2 sperm tests.

OM subject : Investigated year after wife's presentation; blood hormone tests; several sperm tests; chemical stimulation.

OM subject: Investigation fully 4 years after first presentation by wife; low morphology; chemical stimulation.

#### Apparent gender or sex role identification problems

1. Wives: Most evident in case of F subject with disturbed family history. Referred to an actual crisis experienced as adolescent when felt she might be 'butch' and commented unwittingly that she had enjoyed the contraceptive injection because this stopped her menstrual bleeding. Her own mothering had been disturbed, and she appeared to lack any confidence in her potential with regard to the role of motherhood. The other F subject reported that not until well into her married life had she as much as experienced a fantasy about herself in the role of mother or homemaker. Her ambitions and self-concept had always been in terms of a successful career. Of all subjects, she presented with the most obvious ambivalence of an ongoing nature between pursuing her highly successful career in a male-dominated field, or lowering her expectations of herself in this domain to accommodate the raising of a family. In the latter case she considered the active involvement of the mother to be essential. She and two other wives (OF; OM) stood out as

about sex that she was petrified at all times when being left alone in a room with a male. This reaction continued to affect her sexual adjustment for the first year of marriage. The F wife described as having the most severe gender and sex role identity problems, communicated that, "I felt incredibly guilty. I think I would have felt this guilt initially even if we had already been married."

4 husbands (2 OM; 1F; 1OF) reported to have enjoyed their premarital contacts, despite the usual ups and downs of rejection and other aspects of these encounters. The adjustment of the F husband with a psychiatric history could not be adequately assessed, but he described very infrequent contacts (about ten times in all) and a much stronger emphasis than the other husbands on the element of love which he had to feel to be mutually present each time.

2. Marital adjustment pre-diagnosis of infertility: The 2 wives (F; OM) who reported only reasonable satisfaction from the start, both communicated that the sexual aspect of their marriages has always been of greater importance to their respective husbands, and that they have never placed great importance at all on this aspect of their lives. One of these wives (F) reported that she has always been far less libidinal than her husband. Problems in the sexual relationship for the OM wife were related to a general feeling of being trapped in marriage, and were not seen by her to be a primary sexual problem.

3. Marital adjustment post-diagnosis of infertility: 3 wives (2 Fs; OM) associated the difficulties that they reported to

the intrusion into their sexual relations of infertility-related problems such as having to perform according to times on a chart, the menstrual syndrome of regular bouts of depression and withdrawal which only began after involvement in an infertility program, disillusionment with sexual contact which became associated with failure to conceive, and feelings of inadequacy with regard to femininity. Initial difficulties experienced by the OF wife were reported to have spontaneously improved after about a year without help other than from a supportive husband, who gave a similar description of the situation.

Generally the husbands appeared less concerned about the intrusion of the infertility problem as such. They reported to be more indirectly affected by the reactions of their respective wives. However, 1 (F) mentioned occasional periods of lack of satisfaction related to the disappointment of failing to conceive, and 1 (OM) felt that at times sexual contact becomes too regimented to be enjoyable.

4. Contraceptives: Generally the wives' attitude was of preferring to take responsibility in the past when conception was being avoided. The OF wife who had used contraceptives reported that she "liked to be in control", and another (OM) "used to feel more secure". A comment made by several wives was the regret of possibly having prevented conception at times when it may have occurred, prior to the discovery of infertility. Concern about possible effects of certain contraceptives (the "pill" and the copper-T) on the fertility of young girls or

women who have not yet tried to conceive, was expressed by 2 wives (OM; OF).

2 husbands (OM; OF) spontaneously communicated that they felt responsibility should be shared. (Ironically, one being the husband of the OF wife who liked to feel in control!) 1 husband (F) expressed strong feelings against prescription of the "pill" for any girl or women who has not produced a family.

5. Extramarital relationships: The wife (OF) who had had extramarital contact related this indirectly to infertility, as at the time she felt a need to, "boost my confidence and prove myself as a woman".

6. Homosexuality: Wives were generally accepting of homosexuality for others, especially males. The wife (F) who had had adolescent contact, felt that she could be persuaded out of necessity. Husbands were less enthusiastic than their wives.

7. Menstrual syndrome: Those wives experiencing this, clearly related onset to the frustration and disappointment of failure to conceive.

#### Medical intervention

All but one couple (F) unanimously agreed that despite the ups and downs, the overriding effect of the treatment program had brought them closer to one another. 2 wives (F; OM) expressed a great deal of anger that it had taken so long for investigations to be carried out on their respective husbands. There



was a unanimous feeling of satisfaction and gratitude with regard to the actual medical intervention provided by the respective doctors. However, a repeated complaint on the part of the wives was that inadequate attention is given to their emotional needs. The process was described by one wife to be like a "sausage machine". 3 wives reported that they were discouraged from crying when upset, and felt that the doctors were unable or unwilling to cope with their feelings. 2 wives gave as a reason for considering stopping treatment the feeling that their emotional needs were not being met by the medical profession. 3 wives, two of whom were supported by their husbands, expressed dissatisfaction with the communication of information by the doctors, both spontaneously and on request, with regard to their condition, the likely outcome, and the significance of particular treatments prescribed. There was a feeling that doctors were either too busy to oblige, were not aware of the importance to the emotional state of the patient of this type of information, or adopted an attitude that women do not understand these matters. 2 wives substantiated their feelings by reports of a change in attitude whenever their husbands were present for a consultation.

#### Children:

1. Wives: F subject: Would like a child to whom she could be important; no strong feelings in general towards children; "not the cooing type".

F subject: Relatively recent interest in children.

OF subject: Motivated to have a child out of need to achieve rather than love of children or strong desire for child's sake.

Of subject: Positive attitude towards children; would like a child to Love.

OM subject: Very positive; would like several.

OM subject: Loves children.

2. Husbands: F subject: Ambivalent towards children in general; unsure whether would like one.

F subject: Very positive; possibly more motivated than wife to conceive.

OF subject: Negative pole of ambivalence; probably prefer not to have one; annoyed by wife's motivation out of achievement.

OF subject: Positive attitude.

OM subject: Very positive, would like several.

OM subject: Very positive, but would like only one.

Infertility Other than for one wife (OF), rest commonly expressed a feeling that it would be a happier situation if husband and wife were equally responsible for the problem and could really share what is involved.

1. Wives F subject: Gave as reason for infertility a process of "psychological castration", whereby she and circumstances have inhibited her femininity. Reacts to infertility with feeling of failure ("I am used to getting what I want when I work hard for it.") and reinforced feminine inadequacy.

F subject: Used to think it was caused by physical factors, but recently has considered possibly of stress from her high powered job, together with her own ambivalence. Reacts

to infertility with feelings of failure, feels helpless, "like a beetle on its back" and directs a lot of anger towards herself for not succeeding.

OF subject: Anger towards doctor in early teenage years for misdiagnosis of infection which has led to physical complications. Main reaction is sense of failure as a person, rather than as a mother.

OF subject: Has not yet been too traumatized, as feels optimistic, and will cope with ultimate failure by adopting.

OM subject: Felt guilty and inadequate up 'til time of husband's diagnosis. Very angry that the automatic assumption had been that the "fault" was hers. Now wishes she could share the burden of these feelings with her husband, for whom she feels much sympathy.

OM subject: Expressed anger over period when problem was seen as hers. Copes well with the intervention program, but describes feeling of "pain" of infertility that takes on seemingly physical proportions.

2. Husbands F subject: Adamant on basis of single test that it is not his problem, "I would feel terrified if it were me".

F subject: Puzzled by their inability to have a child, unable to offer any understanding.

OF subject: Feels that his wife's problem may be psychological as much as organic, and is unsupportive of her motives for wanting a child.

OF subject: Very supportive of wife who has hormonal imbalance as result of childhood encephalitis. Feels that they will cope with any outcome.

OM subject: Feels guilty about his youthful promiscuity, has irrational fears that he may have "used up all my sperm" on these premarital encounters.

OM subject: Felt devastated when he was diagnosed as having a problem.

CHAPTER SIX

DISCUSSION

The aims and results of the present study will be synthesized and discussed in this chapter. Initially the respective empirical and qualitative data will be presented separately. The validity of the empirical findings will then be considered in terms of underlying assumptions and methodological procedures. On the basis of conclusions drawn, the outcome of the study will be related to the literature in the infertility field of study, and implications for future research will be discussed.

#### Review of the aims of the present study

The view that infertility is likely to be associated with significant psychological disturbance is commonly expressed in the literature. Attempts have been made to empirically demonstrate an association between fertility and numerous psychological factors. In this respect, previous literature and research in the infertility field of study have been critically discussed in earlier chapters, and certain issues raised have informed the hypotheses of the present study that:

1. Global family functioning, as assessed according to a model which emphasizes the interactional dimensions between respective family members, will be significantly more pathological (less healthy) for infertile than for fertile units. The least healthy functioning was predicted for the functional units.
2. Discrepancies in mutual perceptions between respective

husbands and wives will be significantly greater among infertile than fertile couples. The greatest discrepancies were predicted between the respective husbands and wives of the functionally infertile couples. A positive correlation has been demonstrated between the extent of the difference in perceptions between individuals and the facility with which they are able to communicate (Triandis, 1969). Quality of communication between family members has in turn been found to positively correlate with overall healthy family functioning (Haley, 1978; Minuchin, 1974).

These hypotheses were tested on a fertile control group and respective organically infertile and functionally infertile experimental groups of married couples, who were matched as far as possible on relevant personal characteristics such as age, education and psychiatric history. The experimental group were further matched on a number of variables which have specific relevance to the experience of infertility, such as prognostic features and length of time attempting to conceive or involved in medical procedures. (A more complete list is found in the Method section of Chapter Four.)

Previous research has tentatively suggested that differences may be found for subjects in the organic group between those with infertility attributed to organic factors in the male partner, and those with infertility attributed to female organic factors (Bell, 1981; Brand et al, 1982). Thus, subjects for

for the organic experimental group were selected so that there would be an equal representation of couples with the respective male and female organic diagnoses. Additional comparisons on the dimensions outlined in the hypotheses above were conducted between these organic subgroups. No particular directions were predicted, and the analyses provided a test for homogeneity within the organic groups.

The McMaster Family Assessment Device (FAD) was used to assess family functioning on a number of dimensions which reflect the interactional nature of family relationships. Specific scales for the respective dimensions of communication and general family functioning are included in the instrument. The scores of subjects on the FAD were further used indirectly as an additional measure of discrepancies in perceptions between respective husbands and wives in the present study. The Semantic Differential technique was used specifically to measure the discrepancies in mutual perceptions between the respective husbands and wives.

In addition to the empirical investigations, semi-structured interviews were conducted under less formal conditions with two couples from each of the respective functional, male organic and female organic infertility groups. Respective husbands and wives were interviewed separately. The purpose of these interviews was to gain information and impressions about the infertile couples which would add to or possibly complement the findings based on the more formal empirical investigations.



Synthesis and discussion of results regarding the statistical analyses.

Statistical analyses of the psychometric test data did not support any of the hypotheses above with regard to differences between the respective organically and functionally infertile experimental groups, or between either of these groups and the fertile controls. No significant differences were found between the experimental and control groups for either the husbands or the wives respectively on any of the FAD scales or on any of the computations of the SD technique. In fact, the only significant differences between groups investigated in the study were two relatively minor findings between the respective male and female organic groups.

A difference was found between the respective male and female organic groups on the Affective Involvement Scale of the FAD. Husbands in the female organic group rated the functioning of their respective family units as less healthy than their wives did on this particular dimension, whereas there was not a significant discrepancy between the ratings of the respective husbands and wives in the male organic group. As a point of clarification, it is probably useful to mention the types of comparisons made for groups on the FAD scores. Firstly, actual ratings of the husbands and wives respectively were compared between the groups, and secondly comparisons were made of the discrepancies between the husbands and wives within the respective groups. In the case of the significant difference referred to above, the second type of comparison is involved. In the absence of additional positive findings on the FAD

which together would suggest a trend for these groups, it becomes meaningless to discuss this single difference, which could in fact be the result of random variation (type 1 error).

The second significant finding between the male and female organic infertility groups was that both husbands and wives respectively in the male organic group rated themselves as more anxious than the husbands and wives in the female organic group did, on this particular individual item of the SD scale. Considering that this particular finding is based on perception of self as rated on a single item (I am an anxious person ... .. I am not an anxious person), it would be unsound to infer a difference between the groups with regard to anxiety in general. However, taking into account the tentative findings of psychological differences between the male organic and female organic subjects in previous research (Bell, 1981; Brand et al, 1982), it may well be worthwhile to pursue this particular direction with more comprehensive investigations between these particular groups.

When respectively conducting comparisons of subjects' scores on the FAD for the experimental and control groups, and for the respective male and female organic groups, significant discrepancies were found between the ratings of husbands and wives on the respective Problem Solving, Communication, Affective Responsiveness and General Functioning Scales. It would have been of relevance to the hypotheses of the present study if significant differences had been found across the groups in the extent of those discrepancies which were found between husbands and wives. However, nonsignificant results were found

in each case when the discrepancies between husbands and wives were compared across the control and the respective infertile experimental groups, as well as across the respective male and female organic infertility groups.

The significant differences found between husbands and wives showed that in each case husbands had rated the functioning of their respective family units as less healthy than their wives did on the abovementioned scales. Although possibly of general interest in terms of differences between the sexes, these findings have no direct bearing on the actual hypotheses of the present study, and as such will not be discussed. As the FAD was not in fact specifically devised to measure differences in actual perception, it would need to be argued that the consistent pattern of higher scores for husbands in this particular case, is not simply an artefact of how men respond to the scale rather than a reflection of differences in actual perceptions between husbands and wives.

The Semantic Differential technique was specifically devised to measure individual's perceptions or ascribed meanings of constructs. On examining the differences in mutual perceptions of themselves and one another between respective husbands and wives across the various groups in the study, once again no significant differences were found which would support the hypotheses of the study. The extent of the discrepancies in perception between respective husbands and wives did not differ significantly across the fertile control and the respective infertile experimental groups, or across the respective male

and female organic groups. In fact, the actual D scores for all couples included in the study were surprisingly low when taking into account that the possible range was between 0 and 26.8. No two individuals would be expected to share exactly the same perceptions under most conditions, and it would appear that the respective husbands and wives in the study perceived themselves fairly similarly to the way that they were perceived by their respective partners.

In the case of comparisons of husbands' and wives' respective ratings on the single item of the SD scale pertaining to the importance of a career, the particular significant differences consistently found between husbands and wives are readily understood in terms of the prevailing middle class norms and values in our society which ascribes the greater importance of a career to men rather than to women who continue to be associated primarily with the role of homemaker. A career was seen as more important to the husbands than to the wives on the ratings of self and of their respective spouses by all the husbands and wives in the present study.

In terms of the empirical data, the basic hypotheses of the study as outlined above have not been supported by any of the results of the statistical analyses. The overriding impression is that the respective functionally and organically infertile groups and the fertile controls are similar, rather than different, with regard to the specific dimensions evaluated by the present study. The same impression applies to comparisons

made between the respective male and female organic infertility groups. Thus, in the case of the hypotheses originally presented in greater detail in the Design section of Chapter Four, the null hypothesis is accepted in each instance. When comparisons were conducted for the abovementioned groups, no significant differences were found between groups in an assessment of family functioning, as gauged from the perspective of both husbands and wives respectively. There have been indications that discrepancies in mutual perceptions between respective family members are directly associated with effective communication and general functioning of families. Consistent with the finding of no significant differences between the groups studied when compared in the dimension of family functioning which included a specific assessment of communication between members, no significant differences in mutual perceptions between respective husbands and wives were found when comparisons of this dimension were made across the groups.

It remains to be decided to what extent the striking impression of similarities between the groups within the sample of the present study is an accurate reflection of similarities in the general population between the types of individuals investigated, rather than an artefact of the study itself. This issue will be addressed after a discussion of the qualitative findings of the semi-structured interviews which follows, and before relating the overall findings of the present study to the literature or discussing the implications for future research.

Synthesis and discussion of information regarding the semi-structured interviews

There is in fact not a great deal that need be said with regard to the subjective reports of the couples interviewed. The overall impression is consistent with the findings of the statistical analyses of the empirical data, in that similarities between the couples from the different groups were far more striking than any specific differences which could identify subjects with a particular diagnosis.

Although the sample is too small to draw any conclusions, perhaps it is important to point out that in terms of clinical signs and symptoms, the most apparently pathological individual husband and wife interviewed happened to be marital partners with a diagnosis of functional infertility. This particular couple presented with many features speculated in the literature to be commonly associated with functional infertility. The wife presented with clear gender identity problems (Benedek, 1952; Deutsch, 1945) and both reported conflicts with regard to their respective sex role identification (Christie, 1978 & 1980; Eisner, 1963; Slade, 1981). Although both partners came from fairly disturbed family backgrounds, individual husbands and wives from other couples reported psychiatric disturbances of a similar nature in their family histories. However, the only history of divorce among parents was found in the case of both partners of this particular functional couple.

With regard to the wives' attitudes towards children, the most ambivalence was expressed by the two functional wives, and by the female organic wife whose husband ascribed her infertility as much to psychological factors as to her organic condition. The sample size again cautions against too hasty conclusions to be made about the association of these ambivalent feelings and infertility of a functional nature.

An interesting and unexpected finding was the pattern across all the wives with regard to the level of sexual inexperience at the time of marriage. Either promiscuity is not as rife as the media would lead one to believe, or there may be an interesting association between infertility and sexual behaviour. In psychiatric histories taken by Mai et al (1972b), the fertile couples interviewed were found to use significantly more varied coital positions during sexual intercourse than the infertile couples of their sample. Sexual problems have been discussed frequently in the literature with regard to infertile couples (Berger, 1980; Elstein, 1975; Walker, 1978), but perhaps more emphasis could be placed on comparisons between fertile and infertile couples in these investigations.

Most of the wives felt that the problem of infertility would be more easily coped with emotionally by the couple in cases where both partners had been diagnosed as contributing to the condition. In contrast, the functional husband referred to above expressed his relief that the problem was not his, although his fertility had only been assessed on the basis of a single

semen analysis. Attitudes such as these could underly the differences which have been indicated between groups with the respective male organic and female organic infertility diagnosis.

A final comment will be made with regard to the selective nature of the particular couples interviewed, and to the possibility that perceived demand effects may be reflected in certain responses. The couples were aware at the time of the interviews that the interviewers were in some way associated with the discipline of psychology. Whatever the motivations were of the particular couples who were willing to be interviewed, on the whole they appeared to be a normal group of married couples who were coping fairly well with an unfortunate situation. It is not known whether differences would be found between these volunteers and those couples who may have been less willing or less able to discuss their experiences. The wives interviewed commonly expressed a great deal of dissatisfaction with regard to the attention given to their emotional needs by the medical profession. Several wives were supported in these views by their husbands who had accompanied them on visits to the practices concerned, and the frustrations referred to were in some way experienced by the researcher.

Doctors were frequently under great pressure, and the progress of the research project would at times be held up over several days when not even a few minutes were available to discuss certain matters. It would probably take more than a few minutes to discuss some of the emotional problems experienced by patients involved in a demanding, and often disappointing, infertility program of medical intervention. Most of the doctors themselves were aware of the problem, if not of a solution.



### Issues regarding the validity of the empirical findings

A possible interpretation of the failure of the present study to have found significant differences between the groups investigated could be that the interactional focus has been incorrect in concept. Alternatively, the particular method in which the dimensions were assessed may have been unsuited to the purpose for which they have been selected. It is of course possible that neither of these interpretations are correct, and that an absence of positive findings in fact reflects real similarities between the infertile groups and the fertile controls, and between the different types of infertile groups compared.

An insinuation of both the present study and much previous research has been that a significantly greater degree of disturbance may be found for infertile groups in comparison to fertile controls, or for certain subgroups within the infertile sample, along dimensions which imply clinical pathology. For example, numerous studies of differences in individual psychological functioning have focused on clinical entities such as anxiety and neuroticism (Brand et al, 1982; Mai & Rump, 1972; Seward et al, 1965). Although the emphasis on interactional and interpersonal dimensions rather than on individual psychological factors need not in itself be incorrect, one of the instruments in particular, the FAD, has a definite clinical bias, and was devised in fact to be sensitive to differences between ratings at a level of implied clinical pathology.

When administered to a Canadian sample, highly significant differences were found between those subjects known to have a psychiatric history in the family, and those who did not (Epstein

et al, 1983). Thus there may have been differences between the groups in the present study of a more subtle nature than would be detected by an instrument devised to differentiate in terms of actual clinical pathology. However, the preliminary findings of a local study on family functioning before and after the crisis of divorce on a group of not necessarily clinically presenting families, have shown the FAD to be a sensitive measure, with differences in scores making clinical sense which is consistent with the literature on divorce (G.S.Saayman, U.C.T. Department of Psychology: Personal communication.) This research project is similar to the present study in its conception. A potential crisis situation is being investigated which involves the interaction of at least two partners, and sometimes children are included. Assessments have been successfully conducted with the very instrument used in the present study to investigate the interactions of couples who are also confronted with a potentially stressful, although different, situation.

In theory then, the FAD should have been able to detect differences had they been present, not necessarily at a clinical level, between the different groups investigated in the present study. The second objective measure used, the SD technique, was found to be a sensitive measure when administered in a similar way to the present study by Dawes et al (1972), although admittedly they were investigating differences between clinical and non-clinical families.

Care has been taken in the present study to control for as many

extraneous variables as possible. Failure in setting up an intended double blind procedure for administration of the questionnaires has been mentioned, and it was not considered to have been of major consequence in terms of the subjects' responses to the objective, self-explanatory questionnaires. Subjects were carefully matched on those variables likely to influence the findings for the particular groups being investigated. In this respect, results are likely to be a fairly accurate measure in terms of the actual scoring of the questionnaires. Taking this aspect into consideration, together with the findings of the current study of the U.C.T. Psychology Department, the chances are that the negative findings do in fact reflect the conditions that exist between the particular subjects on which the present study was conducted.

At this point it may be appropriate to mention, no matter how speculatively, the particular 'drop outs' of the present study and to suggest ways in which this effect could have hidden differences possibly found in the general population when the hypothesized dimensions were investigated on the specific sample available to the study. It may be significant to note that the only five refusals were all by subjects in the functional group, and in each case the reasons given for refusing were suggestive of the type of disturbance being investigated by the study. Taken in the context of a specific group, five out of a total of sixteen couples is a fairly significant number, and could most certainly have influenced the findings for this group if the very subjects needing to be assessed are those who refuse

to participate. To continue on the level of speculation, on examination of cell means for both the FAD scales and the SD computations, the least healthy ratings on every item were consistently found for the organic group when comparing the scores of the husbands between the respective experimental and control groups. Within the organic sample, the least healthy ratings were found fairly consistently for the husbands in the female organic group. Although none of these differences were significant and will thus not be interpreted, the direction is consistent with predictions made between the fertile and organic infertile groups. The question is thus tentatively raised whether the findings of the present study would not have showed significant differences in the predicted directions of the hypotheses under perfect sampling conditions, using larger samples and without an imbalance with respect to refusals.

Taking a direction away from the previous comment, it is possible that the selection procedure was over-controlled in the selection of only middle class subjects. The arguments for hidden differences between the subjects investigated are more speculative than the arguments for the validity of the present findings, and it is possible that interesting differences may have been found with the inclusion of different class and different cultural groups. An interesting area for future research would be to conduct comparisons between and within the Black communities, for whom the significance of infertility may take on very different meanings. Obvious methodological problems would prevent the replication of the present study with its cultural bias.

In summary, the points raised in this discussion seem to indicate more strongly an acceptance of the present findings, rather than a rejection of them on the basis of the design and procedures according to which the particular hypotheses have been investigated. Furthermore, studies have been referred to which have found significant differences between experimental and control groups of families with regard to psychiatric presentation, and between families before and after divorce, when using the same instruments that have been chosen for the present study. In each of these cases, the studies were based on similar theories with regard to the interactional assumptions underlying the hypotheses of the present study. A shared focus of these and the present study has been on families confronted by a potential crisis situation, and the respective assessments have been made on interactional dimensions between family members which seem to relate logically to each of the particular situations under investigation.

In conclusion then, the aims of the present study were to investigate possible psychological differences between respective organically infertile and functionally infertile experimental groups and a fertile control group of married couples. The emphasis of the investigation was on the interactional nature of the marital relationship which creates the context for fertility or infertility to occur. Accordingly, the particular psychological dimensions chosen for the comparisons between the groups were a global assessment of family functioning based on an interactional model with regard to respective family

members, and the discrepancies in mutual perception between respective partners which are considered to be associated with the quality of communication and general functioning between family members. No differences were found between any of the groups investigated when comparisons were made on these dimensions, as assessed by the McMaster Family Assessment Device: Version 3 in the case of family functioning, and by the Semantic Differential technique in the case of discrepancies in mutual perceptions.

These empirical findings of no differences between groups have been supported by the more subjective interviews conducted with a small group of infertile couples representing the respective functional, male organic and female organic diagnostic groups. The type of clinical features speculated in the literature to be common among infertile patients, especially those with a functional diagnosis, were only apparent in the case of one couple interviewed. On the whole, subjects interviewed impressed as decidedly normal individuals who were coping well with an unfortunate situation.

Contrary to these impressions, interviewers involved in the as yet unpublished divorce study, were struck by the alarming extent to which clinically pathological features appeared to be present among their subjects with whom interviews had been conducted.

#### Implications for future research

Comparisons were made between a respective group of functionally

infertile and organically infertile married couples and between these groups respectively and a group of fertile controls, on psychological dimensions which stress the interactional nature of the marital relationship. The negative findings are consistent with the predominant outcome of much of the previous research which has compared similar groups, but with an emphasis on individual rather than interactional psychopathological factors (Brand et al, 1982; Kipper et al, 1976; Mai et al, 1972; Seward et al, 1965). The contradictory and inconsistent findings reported with regard to psychological factors and infertility have been discussed at length in terms of methodological problems in Chapter Three. Many of the claims that associate infertility with psychological disturbance have been based on poorly controlled or isolated case studies of individual patients (Benedek, 1952; Deutsch, 1945; Eisner, 1963).

An inherent problem in the underlying assumptions of the present study, as well as most of the empirical studies referred to, has been the association of infertility with psychological disturbance of the order of clinical diagnosis. Although intensions of investigations are expressed in terms of an evaluation of "differences" between groups, invariably the dimension on which comparisons are conducted have strong clinical implications. Taking into consideration the disappointing outcome of this type of research, including the empirical findings of the present study which attempted to shift the focus from individual to interactional dimensions,

there is indication that the general goals need to be evaluated not only in terms of the interactional or individual nature of the psychological factors investigated , but also in terms of the nature of these factors with regard to clinical psychopathology. Although this view has been expressed for some time (Seward et al, 1965), it does not appear to have been given sufficient serious thought by researchers in the field.

Although frequently alluded to in the general literature, the importance of the interactional factors between partners in an infertile marriage has hardly been taken into account at all in empirical research, and as such remains inadequately assessed. The present study has been but one way of investigating this dimension, whereas other methods, including alternative objective measures and well structured clinical interviews (Bell, 1981), may be able to detect the hypothesized differences. There has been some indication that this may well be the case, but studies of this nature previously referred to, such as Marshall (1967) and Platt (1973), do not seem to have made much impact.

Perhaps, however, taking into account the inconsistent, contradictory and frequently negative findings of much empirical research in the field, together with points raised which suggest that more serious shortcomings than an absence of adequate control measures may account for this, energies would best be channelled in other directions.

Those working in the area of counselling and crises inter-



vention previously referred to seem to have made a particularly valuable contribution in systematizing the types of problems that the infertile couple are likely to experience, and the ensuing emotional pain and conflict (Bresnick, 1972; Mazor, 1979; Menning, 1978 & 1980). A particular attraction of this model is the de-emphasis on psychopathology, which is not automatically assumed to be present in any case of infertility. However, workers in the field need to be attuned to the possibility of clinical signs, and should at least be trained to recognize those individual cases who may need more intensive therapy in coming to terms with the confronting problem of infertility, in addition to more deep-seated difficulties. Such cases could be referred to more suitably trained therapists when necessary. An interesting study would be to investigate the proportion of such referrals who are in fact diagnosed as functionally infertile, as opposed to other categories of infertility. This may be a more appropriate way of assessing to what extent psychological factors are associated with functional infertility. The usual approach begins with an assumption of psychopathology and proceeds to include all available functionally diagnosed patients in the investigations. Furthermore, empirical investigations of a clinically presenting group of infertility patients, including all categories, may be able to detect the hypothesized differences between the groups and between the fertile, though perhaps not normal, population, where previous research has failed.

These final conclusions are not dissimilar from those reached by Seward et al (1963). As yet, their influence on the field of study has not been too apparent.

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## APPENDICES

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## APPENDIX A

Salient features of the McMaster model of  
family functioning and the McMaster Family  
Assessment Device (FAD)

Appendix A Salient features of the McMaster model of family functioning and the McMaster Family Assessment Device (FAD). (For purposes of simplification and flow, the outline below consists in part of select sections from Epstein et al (1977 & 1983) without specific referencing, although original wording has at times been used.)

The McMaster model of family functioning focuses on aspects of family functioning which have been found to have relevance in dealing with clinically presenting families. The spectrum of family functioning is dealt with on a continuum of healthy to unhealthy, and thus allows the placement of a given family's functioning on this continuum. Concern is not with what is in the family which produces pathology in the individual, but rather with the processes occurring within the family system which produce behaviour which may be labelled pathological. As such, the McMaster model is based on a systems approach, and underlying aspects of systems theory may be summarized as follows:

1. Parts of the family are related to each other.
2. One part of the family cannot be understood in isolation from the rest of the system.
3. Family functioning is more than just the sum of the parts.
4. A family's structure and organization is important in determining the behaviour of family members.
5. The transactional patterns of the family system are involved in shaping the behaviour of family members.

In the course of carrying out what are considered to be the

primary functions within a family unit, namely the social, psychological and biological development and maintenance of family members, families deal with a number of tasks which are grouped into three areas: Basic Tasks, Developmental Tasks and Hazardous Tasks. Basic tasks are instrumental in nature and include such major and basic issues as the provision of food and shelter. Developmental tasks encompass those family issues that arise with the natural stages and processes of growth for both individual members (for example, infancy, childhood, adolescence, middle and old age etc.) and for the family as a unit (for example, beginning of the marriage, first pregnancy, birth of first child etc.). Hazardous tasks refer to crises that arise in association, for example, with illness, accidents, loss of income, job changes, moves etc. The crisis of infertility would be included in this latter category of tasks.

Family functioning in relation to carrying out these tasks, is considered in terms of the dimensions of Problem Solving, Communication, Roles, Affective Responsiveness, Affective Involvement and Behaviour Control. These dimensions, which correspond to six of the FAD Subscales, will be briefly defined and their respective items on the FAD will be listed, as well as the items of the General Functioning Scale which is aimed at assessing the overall health/pathology of the family. (Items are not grouped according to their particular subscales in the form in which the FAD is administered.)

1. Problem Solving refers to the family's ability to

resolve problems (issues which threaten the integrity and functional capacity of the family) at a level that maintains effective family functioning.

FAD items:

We usually act on our decisions regarding problems.

After our family tries to solve a problem, we usually discuss whether it worked or not.

We resolve most emotional upsets that come up.

We confront problems involving feelings.

We try to think of different ways to solve problems.

2. Communication is defined as the exchange of information among family members. The focus is on whether verbal messages are clear with respect to content and direct in the sense that the person spoken to is the person for whom the message is intended.

FAD items:

When someone is upset the others know why.

You can't tell how a person is feeling from what they are saying.

People come right out and say things instead of hinting at them.

We are frank with each other.

We don't talk to each other when we are angry.

When we don't like what someone has done, we tell them.

3. Roles focuses on whether the family has established patterns of behaviour for handling a set of family

functions which includes provision of resources, providing nurturance and support, supporting personal development, maintaining and managing the family systems and providing adult sexual gratification. In addition, consideration is given to whether tasks are clearly and equitably assigned to family members and whether tasks are carried out responsibly by family members.

FAD items:

When you ask someone to do something, you have to check that they did it.

We make sure members meet their family responsibilities.

Family tasks don't get spread around enough.

We have trouble meeting our bills.

There's little time to explore personal interests.

We discuss who is to do household jobs.

If people are asked to do something, they need reminding.

We are generally dissatisfied with the family duties consigned to us.

4. Affective Responsiveness assesses the extent to which individual family members are able to experience appropriate affect over a range of stimuli. Both welfare and emergency emotions are considered.

FAD items:

We are reluctant to show our affection for each other.

Some of us just don't respond emotionally.

We do not show our love for each other.

Tenderness takes second place to other things in our family.

We express tenderness.

We cry openly.

5. Affective Involvement is concerned with the extent to which family members are interested in and place value on each other's activities and concerns. The healthiest families have intermediate levels of involvement, neither too little nor too much.

FAD items:

If someone is in trouble, the others become too involved.

You only get the interest of others when something is important to them.

We are too self-centred.

We get involved with each other only when something interests us.

We show interest in each other when we can get something out of it personally.

Our family shows interest in each other only when they can get something out of it.

Even though we mean well, we intrude too much into each other's lives.

6. Behaviour Control assesses the way in which a family expresses and maintains standards for the behaviour of its members. Behaviour in situations of different sorts (dangerous, psychological and social) is assessed, as are different patterns of control (flexible, rigid,

laissez-faire and chaotic are considered).

FAD items:

We don't know what to do when an emergency comes up.

We can easily get away with breaking the rules.

We know what to do in an emergency.

We have no clear expectations about toilet habits.

We have rules about hitting people.

We don't hold to any rules or standards.

If the rules are broken, we don't know what to expect.

Anything goes in our family.

There are rules about dangerous situations.

## 7. General functioning

FAD items:

Planning family activities is difficult because we misunderstand each other.

In times of crisis we can turn to each other for support.

We cannot talk to each other about the sadness we feel.

Individuals are accepted for what they are.

We avoid discussing our fears and concerns.

We can express feelings to each other.

There are lots of bad feelings in the family.

We feel accepted for what we are.

Making decisions is a problem for our family.

We are able to make decisions about how to solve problems.

We don't get along well together.

We confide in each other.



APPENDIX B

The McMaster Family Assessment Device

(FAD): Version 3

## INSTRUCTIONS:

This booklet contains a number of statements about families. Please read each statement carefully, and decide how well it describes your own family. You should answer according to how you see your family.

For each statement there are four (4) possible responses:

Strongly Agree (SA)

Check SA if you feel that the statement describes your family very accurately.

Agree(A)

Check A if you feel that the statement describes your family for the most part.

Disagree (D)

Check D if you feel that the statement does not describe your family for the most part.

Strongly Disagree (SD)

Check SD if you feel that the statement does not describe your family at all.

These four responses will appear below each statement like this:

41. We are not satisfied with anything short of perfection.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

The answer spaces for statement 41 would look like this. For each statement in the booklet, there is an answer space below. Do not pay attention to the blanks at the far right hand side of each answer space. They are for office use only.

Try not to spend too much time thinking about each statement, but respond as quickly and as honestly as you can. If you have trouble with one, answer with your first reaction. Please be sure to answer every statement and mark all your answers in the space provided below each statement.

1. Planning family activities is difficult because we misunderstand each other.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

2. We resolve most everyday problems around the house.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

3. When someone is upset the others know why.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

4. When you ask someone to do something, you have to check that they did it.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

5. If someone is in trouble, the others become too involved.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

6. In times of crisis we can turn to each other for support.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

7. We don't know what to do when an emergency comes up.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

8. We sometimes run out of things that we need.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

9. We are reluctant to show our affection for each other.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

10. We make sure members meet their family responsibilities.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

11. We cannot talk to each other about the sadness we feel.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

12. We usually act on our decisions regarding problems.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

13. You only get the interest of others when something is important to them.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

14. You can't tell how a person is feeling from what they are saying.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

15. Family tasks don't get spread around enough.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

16. Individuals are accepted for what they are.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

17. You can easily get away with breaking the rules.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

18. People come right out and say things instead of hinting at them.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

19. Some of us just don't respond emotionally.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

20. We know what to do in an emergency.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

21. We avoid discussing our fears and concerns.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

22. It is difficult to talk to each other about tender feelings.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

23. We have trouble meeting our bills.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

24. After our family tries to solve a problem, we usually discuss whether it worked or not.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

25. We are too self-centered.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

26. We can express feelings to each other.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

27. We have no clear expectations about toilet habits.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

28. We do not show our love for each other.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

29. We talk to people directly rather than through go-betweens.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

30. Each of us has particular duties and responsibilities.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

31. There are lots of bad feelings in the family.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

32. We have rules about hitting people.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

33. We get involved with each other only when something interests us.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

34. There's little time to explore personal interests.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

35. We often don't say what we mean.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

36. We feel accepted for what we are.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

37. We show interest in each other when we can get something out of it personally.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

38. We resolve most emotional upsets that come up.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

39. Tenderness takes second place to other things in our family.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

40. We discuss who is to do household jobs.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

41. Making decisions is a problem for our family.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

42. Our family shows interest in each other only when they can get something out of it.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

43. We are frank with each other.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

44. We don't hold to any rules or standards.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

45. If people are asked to do something, they need reminding.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

46. We are able to make decisions about how to solve problems.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

47. If the rules are broken, we don't know what to expect.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

48. Anything goes in our family.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

49. We express tenderness.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

50. We confront problems involving feelings.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

51. We don't get along well together.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

52. We don't talk to each other when we are angry.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

53. We are generally dissatisfied with the family duties assigned to us.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

54. Even though we mean well, we intrude too much into each others lives.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

55. There are rules about dangerous situations.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

56. We confide in each other.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

57. We cry openly.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

58. We don't have reasonable transport.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

59. When we don't like what someone has done, we tell them.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

60. We try to think of different ways to solve problems.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

APPENDIX C

Adaptation of the McMaster Family  
Assessment Device



## INSTRUCTIONS:

This booklet contains a number of statements about families. Please read each statement carefully, and decide how well it describes your own family. You should answer according to how you see your family, which may as yet be childless.\*

For each statement there are four (4) possible responses:

**Strongly Agree (SA)**

Check SA if you feel that the statement describes your family very accurately.

**Agree (A)**

Check A if you feel that the statement describes your family for the most part.

**Disagree (D)**

Check D if you feel that the statement does not describe your family for the most part.

**Strongly Disagree (SD)**

Check SD if you feel that the statement does not describe your family at all.

These four responses will appear below each statement like this:

41. We are not satisfied with anything short of perfection.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

The answer spaces for statement 41 would look like this. For each statement in the booklet, there is an answer space below. Do not pay attention to the blanks at the far right hand side of each answer space. They are for office use only.

Try not to spend too much time thinking about each statement, but respond as quickly and as honestly as you can. If you have trouble with one, answer with your first reaction. Please be sure to answer every statement and mark all your answers in the space provided below each statement.

\*In the case of families with children, wherever applicable the emphasis on all items should be on the relationship between husband and wife within the family context.

1. Planning family activities is difficult because we misunderstand each other.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

2. We resolve most everyday problems around the house.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

3. When one of us is upset the other knows why.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

4. When I ask my spouse to do something, I have to check that it is done.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

5. If one of us is in trouble, the other becomes too involved.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

6. In times of crisis we can turn to each other for support.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

7. We don't know what to do when an emergency comes up.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

8. We sometimes run out of things that we need.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

9. We are reluctant to show our affection for each other.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

10. We make sure both of us meet our family responsibilities.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

11. We cannot talk to each other about the sadness we feel.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

12. We usually act on our decisions regarding problems.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

13. We only get one another's interest when something is important to both of us.  
 \_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD
14. We can't tell how the other is feeling from what they are saying.  
 \_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD
15. Family tasks don't get spread around enough.  
 \_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD
16. As individuals we accept one another for what we are.  
 \_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD
17. We can easily get away with breaking the implicit rules of our family.  
 \_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD
18. We come right out and say things instead of hinting at them.  
 \_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD
19. One of us just doesn't respond emotionally.  
 \_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD
20. We know what to do in an emergency.  
 \_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD
21. We avoid discussing our fears and concerns.  
 \_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD
22. It is difficult to talk to each other about tender feelings.  
 \_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD
23. We have trouble meeting our bills.  
 \_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD
24. After we have tried to solve a problem, we usually discuss whether it worked or not.  
 \_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

25. We are too self-centered.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

26. We can express feelings to each other.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

27. We have no clear expectations about family hygiene.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

28. We do not show our love for each other.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

29. We talk to <sup>each other</sup> directly rather than through go-betweens.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

30. Each of us has particular duties and responsibilities.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

31. There are lots of bad feelings in the family.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

32. We have <sup>implicit family</sup> rules not to hit one another.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

33. We get involved with each other only when something interests us.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

34. There's little time to explore personal interests.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

35. We often don't say what we mean.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

36. We feel accepted for what we are.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

37. We show interest in each other when we can get something out of it personally.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

38. We resolve most emotional upsets that come up.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

39. Tenderness takes second place to other things in our family.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

40. We discuss who is to do household jobs.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

41. Making decisions is a problem for our family.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

42. We show interest in each other only when we can get something out of it.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

43. We are frank with each other.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

44. We don't have any rules or standards for family behaviour that we keep to.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

45. If I ask my spouse to do something, he/she needs to be reminded.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

46. We are able to make decisions about how to solve problems.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

47. If the rules are broken, we don't know what to expect.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

48. Anything goes in our family.

\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD

49. We express tenderness.  
\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_
50. We confront problems involving feelings.  
\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_
51. We don't get along well together.  
\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_
52. We don't talk to each other when we are angry.  
\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_
53. We are generally dissatisfied with the family duties assigned to us.  
\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_
54. Even though we mean well, we intrude too much into each others lives.  
\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_
55. We have family rules or plans for coping with emergency situations.  
\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_
56. We confide in each other.  
\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_
57. We cry openly.  
\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_
58. We don't have reasonable transport.  
\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_
59. When we don't like what the other has done, we tell them.  
\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_
60. We try to think of different ways to solve problems.  
\_\_\_\_\_ SA \_\_\_\_\_ A \_\_\_\_\_ D \_\_\_\_\_ SD \_\_\_\_\_

## APPENDIX D

Semantic Differential for  
the construct 'Self'

**INSTRUCTIONS:** Place an X on the 7-point scale to indicate where you see YOURSELF on each of the following bi-polar items. Try to estimate honestly how you usually feel, avoiding a neutral position wherever possible.

For example:

good -  $\overset{x}{-}$  - - - - - bad = quite good  
 mean - - - - -  $\overset{x}{-}$  generous = very generous  
 patient - - -  $\overset{x}{-}$  - - - impatient = neither one nor the other (i.e. neutral)

I am a self-satisfied person	- - - - -	I am a dissatisfied person
I am moody and depressed	- - - - -	I am cheerful and happy
I understand others	- - - - -	I do not understand others
I am understood by others	- - - - -	I am misunderstood by others
I am not considerate of others	- - - - -	I am considerate of others
I get jealous easily	- - - - -	I do not get jealous easily
I am dominating and bossy	- - - - -	I am passive and submissive
I am easily able to criticize and find fault with myself	- - - - -	I do not easily criticise or find fault with myself
A career is important to me	- - - - -	A career is not important to me
I have a good ability to listen	- - - - -	I have a poor ability to listen
I care about what others think of me	- - - - -	I do not care about what others think of me
I am a confident person	- - - - -	I am not a confident person
I would chose to have at least one child in my marriage	- - - - -	I would choose to have no children in my marriage
I understand myself well	- - - - -	I do not understand myself well
I am competitive	- - - - -	I am not competitive
I am an independent person	- - - - -	I am a dependent person
I do not cope well with conflict	- - - - -	I cope well with conflict
I am an anxious person	- - - - -	I am not an anxious person
I am warm and affectionate	- - - - -	I am cool and aloof
I communicate well with others	- - - - -	I do not communicate well with others



## APPENDIX E

Semantic Differential for the  
construct 'Spouse'

**INSTRUCTIONS:** Place an X on the 7-point scale to indicate where you see your SPOUSE on each of the following bi-polar items. Try to estimate honestly how you usually feel, avoiding a neutral position wherever possible.

For example:

good -  $\frac{x}{7}$  - - - - - bad = quite good

mean - - - - -  $\frac{x}{7}$  generous = very generous

patient - - -  $\frac{x}{7}$  - - - impatient = neither one nor the other (i.e. neutral)

I am a self-satisfied person	- - - - -	I am a dissatisfied person
I am moody and depressed	- - - - -	I am cheerful and happy
I understand others	- - - - -	I do not understand others
I am understood by others	- - - - -	I am misunderstood by others
I am not considerate of others	- - - - -	I am considerate of others
I get jealous easily	- - - - -	I do not get jealous easily
I am dominating and bossy	- - - - -	I am passive and submissive
I am easily able to criticize and find fault with myself	- - - - -	I do not easily criticise or find fault with myself
A career is important to me	- - - - -	A career is not important to me
I have a good ability to listen	- - - - -	I have a poor ability to listen
I care about what others think of me	- - - - -	I do not care about what others think of me
I am a confident person	- - - - -	I am not a confident person
I would chose to have at least one child in my marriage	- - - - -	I would choose to have no children in my marriage
I understand myself well	- - - - -	I do not understand myself well
I am competitive	- - - - -	I am not competitive
I am an independent person	- - - - -	I am a dependent person
I do not cope well with conflict	- - - - -	I cope well with conflict
I am an anxious person	- - - - -	I am not an anxious person
I am warm and affectionate	- - - - -	I am cool and aloof
I communicate well with others	- - - - -	I do not communicate well with others

## APPENDIX F

Semantic Differential for the  
construct 'How you imagine your  
Spouse sees you'

INSTRUCTIONS: Place an X on the 7-point scale to indicate where you imagine that you would be rated by your spouse i.e. how your spouse is likely to describe you.

good -  $\frac{x}{7}$  - - - - - bad = quite good

mean - - - - -  $\frac{x}{7}$  generous = very generous

patient - - -  $\frac{x}{7}$  - - - impatient = neither one nor the other (i.e. neutral)

I am a self-satisfied person - - - - -	I am a dissatisfied person
I am moody and depressed - - - - -	I am cheerful and happy
I understand others - - - - -	I do not understand others
I am understood by others - - - - -	I am misunderstood by others
I am not considerate of others - - - - -	I am considerate of others
I get jealous easily - - - - -	I do not get jealous easily
I am dominating and bossy - - - - -	I am passive and submissive
I am easily able to criticize and find fault with myself - - - - -	I do not easily criticise or find fault with myself
A career is important to me - - - - -	A career is not important to me
I have a good ability to listen - - - - -	I have a poor ability to listen
I care about what others think of me - - - - -	I do not care about what others think of me
I am a confident person - - - - -	I am not a confident person
I would chose to have at least one child in my marriage - - - - -	I would choose to have no children in my marriage
I understand myself well - - - - -	I do not understand myself well
I am competitive - - - - -	I am not competitive
I am an independent person - - - - -	I am a dependent person
I do not cope well with conflict - - - - -	I cope well with conflict
I am an anxious person - - - - -	I am not an anxious person
I am warm and affectionate - - - - -	I am cool and aloof
I communicate well with others - - - - -	I do not communicate well with others

## APPENDIX G

Semi-structured interview for husbands

SEMI-STRUCTURED INTERVIEW (HUSBAND)

NAME:

Date of Birth:

Age:

Education level/Qualification/Training:

Occupation:

Any related problems

Would you prefer your wife to work or be a housewife?  
(Why?)

Hobbies/Interests

FAMILY HISTORY

MOTHER : Age

Education level/occupation:

Brief personality sketch:

Age at which had first sibling; subject?

Would you like your children to receive the same  
kind of mothering as your mother provided?

In what ways do your wife and mother differ/ are  
similar?

FATHER : Age

Education/Occupation

Brief personality sketch

Age at which had first sibling ; subject

Would you rear your children in the same way as your  
father did?

In what ways do you and your father differ/are similar?

General quality and duration of parents' marriage.  
(Any previous marriages, divorce, remarriage)

SIBLINGS (Chronological order, including subject)

Sex	Age	Biological/Adopted	Married/Divorced	No of children (Biological/ adopted)
-----	-----	--------------------	------------------	--

FAMILY HISTORY OF ILLNESS (Extended family)

Medical

Psychiatric

Infertility

Role of Religion in family

PERSONAL HISTORY

Early development (significant features)

Puberty (significant features; social adjustment; adjustment to  
physical/genital maturation)

Gratification or tension habits

Display of emotions

Fear states

Obsessive or compulsive features

Social relations

General health

Illness: Medical

Psychiatric

Sexual History:

Premarital (reactions; positive or negative;  
associated guilt)

Do you enjoy a satisfactory sexual relationship in your  
marriage? (If NO, expand)

Extra-marital (circumstances; positive or  
negative experience; associated guilt or  
reactions; spouse's awareness/reaction)

Extra-marital on part of spouse (circumstances;  
reactions of subject/spouse)

Contraceptions: Attitude towards/responsibility

Patterns of use (pre-marital/marital)

Homosexual encounters

Marital History:

Previous marriages: Yes/No

Age

Duration

Quality

Reason for breakdown

Present marriage

Age

Durations

Quality

Related problems (past and current)

Occupational

Family

Housing

Finance

Social life

Sexual

Infertility related

Other

Role of religion in your marriage

### INFERTILITY

What do you consider to be the cause of the infertility problem  
in your marriage?

Duration of problem:

Medical interventions (doctors; procedures; length of involvement)

Attitudes and reactions to infertility/intervention

Spouse's attitude and reactions to infertility/intervention.

Old wives remedies:

What does infertility mean to you as an individual; as a couple?

Why do you want your own baby? And your spouse?

Would you like a boy or a girl? (Why?)

What are your feelings towards pregnancy; childbirth?

What do you think about being a parent?

What kind of parent do you feel you would make?

What kind of parent do you feel your spouse will make?

What do you think your spouse's attitude is towards being a parent?

Have you considered adoption?

What are your feelings? Your spouse's feelings?

Have you considered artificial insemination?

What are your feelings? Your spouse's feelings?

How often do you and your spouse discuss the matter of infertility?

Is it difficult to discuss together? (why?)

Who is most affected?

How supportive and understanding is your spouse of your feelings?

What are the effects on your marriage?

Could you conceive of the problem leading to divorce?

Do your family or friends know?

How easily do you discuss the matter with them?

With whom else do you discuss the matter?

Are you satisfied with the help you get?

Who or what has helped the most?

Does the absence of children effect your relationship with others?

What do you feel about families with children?

Do you feel unfulfilled?

Do you feel that childless women need to work to find satisfaction?

Is there anything that has not been covered above that you would like to add, or that you feel would be helpful for us to understand your experience better?

Are there any queries that you would like to have considered if possible?



APPENDIX H

Semi-structured interview for wives

SEMI-STRUCTURED INTERVIEW (WIVES)

NAME:

Date of Birth:

Age

Education level/Qualifications/Training:

Occupation:

Any related problems

Would you prefer to have a job or be a housewife?  
(Why)

Hobbies/Interests

FAMILY HISTORY

MOTHER: Age

Education/Occupation

Brief personality sketch

Age at which had first sibling; subject

Would you rear your children in the same way as your mother did?

In what ways do you differ from/are you similar to your mother?

FATHER: Age

Education/Occupation

Brief personality sketch

Would you like your children to receive the same kind of fathering as your father provided?

In what ways do your father and husband differ/are similar?

General quality and duration of parent's marriage. (Any previous marriages, divorce, remarriages?).

SIBLINGS (Chronological order, including subject)

Sex	Age	Biological/Adopted	Married/Divorced	No of children (Biological/ Adopted)
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FAMILY HISTORY OF ILLNESS (Extended Family)

Medical

Psychiatric

Intertility

ROLE OF RELIGION IN FAMILY

PERSONAL HISTORY

Early development (significant features)

Puberty : (significant features; social adjustment; adjustment to physical maturation/menses)

Gratification or tension habits:

Display of emotions;

Fear states:

Obsessive or compulsive features:

Social Relations:

General Health:

Illness : Medical

Psychiatric

Sexual History:

Premarital (reaction; positive or negative experience;  
associated guilt)

Do you enjoy a satisfactory sexual relationship in  
your marriage? (If NO, expand).

Extra-marital (circumstances; positive or negative  
experience; associated guilt or  
reactions; spouse's awareness/reactions)

Extra-marital on part of spouse. (Circumstances  
reactions of subject/spouse.)

Contraceptives: Yes/No Attitude/Responsibility Type Duration

Pre-marital

During Marriage

Miscarriages or Abortions: (Legal/Illegal)(Attitude/feelings)

Homosexual encounters:

Marital History:

Previous marriages: Yes/No

Age

Duration

Quality

Reason for breakdown

Present marriage

Age

Duration

Quality

Related problems (past and current)

Occupational

family

housing

finance

social life

sexual

infertility related

other

Role of religion in your marriage

## INFERTILITY

What do you consider to be the cause of the infertility problem  
in your marriage?

Duration of problem:

Medical interventions (doctors; procedures; length of involvement)

Attitudes and reactions to infertility/intervention

Spouse's attitude and reactions to infertility/intervention.

Old wives remedies:

What does infertility mean to you as an individual; as a couple?

Why do you want your own baby? And your spouse?

Would you like a boy or a girl? (Why?)

What are your feelings towards pregnancy; childbirth?

What do you think about being a parent?

What kind of parent do you feel you would make?

What kind of parent do you feel your spouse will make?

What do you think your spouse's attitude is towards being a parent?

Have you considered adoption?

What are your feelings? Your spouse's feelings?

Have you considered artificial insemination?

What are your feelings? Your spouse's feelings?

How often do you and your spouse discuss the matter of infertility?

Is it difficult to discuss together? (why?)

Who is most affected?

How supportive and understanding is your spouse of your feelings?

What are the effects on your marriage?

Could you conceive of the problem leading to divorce?

Do your family or friends know?

How easily do you discuss the matter with them?

With whom else do you discuss the matter?

Are you satisfied with the help you get?

Who or what has helped the most?

Does the absence of children effect your relationship with others?

What do you feel about families with children?

Do you feel unfulfilled?

Do you feel that childless women need to work to find satisfaction?

Is there anything that has not been covered above that you would like to add, or that you feel would be helpful for us to understand your experience better?

Are there any queries that you would like to have considered if possible?